

GURPS® Space

SPACE ATLAS

A Compendium of Worlds for Interstellar Roleplaying



*By Steve Jackson
and William A. Barton*

STEVE JACKSON GAMES

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GURPS® SPACE ATLAS

The Old Frontiers Sector

A Compendium of Worlds for Interstellar Roleplaying Adventure

By Steve Jackson and William A. Barton

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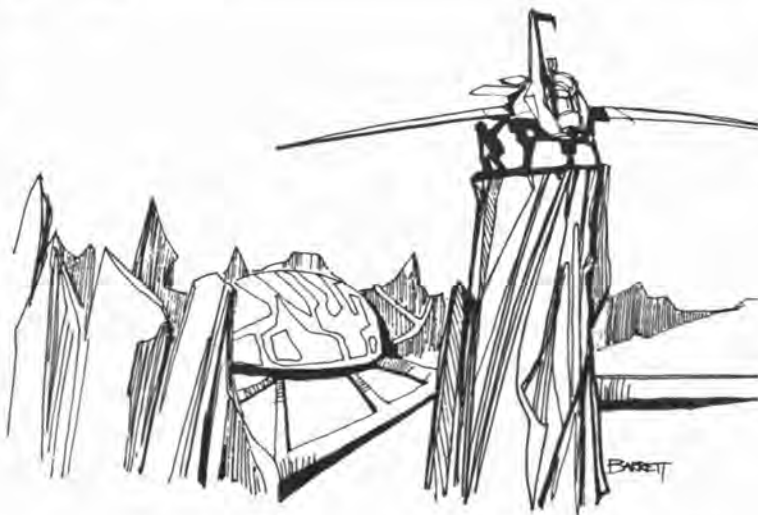
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Using This Book

The *Space Atlas* contains 29 Planetary Records, which the GM may photocopy and hand to his players when they are seeking information about a planet. This is the "publicly available information" that would be contained in any standard database.

The GM should *not* show the pages of text to the players. Instead, he should give them only as much of this information as he thinks their backgrounds — or later investigations and experience — entitle them to. In general, the players can be told the general history of each world, but not all the details of its present situation. Material marked "GM's Information," and the material given as adventure ideas for each planet, should definitely remain confidential.



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INTRODUCTION

World Maps

The world maps use the system given in *GURPS Space* — an “equal-area icosahedral” projection. Each hex represents the same amount of space. Size of a hex depends on the size of the planet. Multiply the world’s diameter by .07 to determine the distance across one hex.

Unless specified otherwise, the north pole is at the top of the map, in the hex formed by the joining of the five points. Because this tends to splinter the polar areas, a circular area centered on the North Pole is also shown at the top of the map, and an area centered on the South Pole is shown at the bottom.

The zero meridian line and the equator are shown as dashed lines. Lighter dashed lines connect hexes that are divided on the map. If this map were cut out and folded up, it would form a 20-sided “globe.”

Specific points of interest are shown by a letter, keyed to text. Note that if (for instance) a town and starport symbol appear in adjacent hexes, the starport is actually in the town hex unless the description says otherwise.

Map Key

This key shows suggested colors, for those making their own maps, and standard black-and-white symbols.

Ocean:	
Dark blue	
Freshwater Sea:	
Light blue	
Marsh/Swamp:	
Yellow-green	
Plain/Steppe:	
Light green	
Icy/Barren:	
White	
Mountain/Volcanic:	
Dark brown	
Hilly/Rough:	
Light brown	
Forest/Jungle:	
Dark green	
Desert/Barren:	
Rust-red	
Urban/Populated:	
Crosshatched lines	
Major city	
Capital	
Restricted area	
Important starport	

This book includes descriptions of 29 worlds — 26 inhabited, and three that are uninhabited but significant — in 27 star systems. All this material is designed to fit any interstellar campaign. The worlds are presented as individual entities; you can link them as you choose. If you want to use the entire “Old Frontiers Sector” as a unit, we’ve provided maps (see pp. 4-7) so you can do so. Other worlds of your own design may be added as well.

Format

Each listing provides detailed information on the world, along with general information about its star and the other planets in the system. These are the facts that should prove most important to starfarers initially. The GM may further develop the individual systems, generating details of the other planets — their physical details, native life if any, and so on.

The systems are listed in alphabetical order by the names of the *worlds*. Terminology is as defined in the *Stars and Worlds* section of *GURPS Space*. All stars are main sequence unless otherwise indicated. Star class and subtype are given; a star listed, for instance, as “G3 V” is a type G star, subtype 3, of class V (main sequence).

Alternate Backgrounds

To keep this atlas as generic as possible, the listings for the individual worlds contain very little about “external” politics and events. Therefore, for those using the Old Frontiers Sector as a unit, we present a few short “general briefings,” outlining *sector* histories suitable for different campaign backgrounds. Pick the one suitable for your campaign, and you’ll find that it links with the various planet descriptions. However, the following alternate histories have nothing to do with each other — use only *one* of them!

Anarchy

The Old Frontiers Sector is the general name for an area at the border of explored space. It is far enough away from the centers of galactic civilization that there is no true interstellar government; indeed, some of the planets have always been independent.

There have been a number of small wars over the past hundred years, but — except for the civil war on Lorn and the internecine conflict that destroyed Roentgen — none have been too destructive. However, interplanetary politics are heating up. Drayhoah and Bannar are lining up allies for a religious jihad. Mad Ryoc of Survias is eying her neighbors greedily. And if the sector breaks down into squabbling, the mercenary leaders of Summer may be tempted to conquer on their own behalf. Redugun — close by, rich, and disorganized — seems a likely target.

Alliance

Most of the worlds of the Old Frontiers Sector were settled within the same 200-year period. However, they have radically different political structures. Most are now members of the Alliance, but some (notably Sheba and Bannar) chafe under even this much control. Al-Jebel and Carstairs remain nonaligned. And Drayhoah, once a member, dropped out forty years ago and has since then been quite open in its desire to see the Alliance break up. Bannar remains a member largely to get political leverage against Drayhoah.

Though there is no separate “sector government,” several Alliance agencies are organized into sector divisions. The Navy and Patrol, and most other agencies, are headquartered on Bollux, because of its central location.

Federation

The Old Frontiers Sector of the Federation is, economically and politically, one of its more backward regions. The Sector Governor, Jumal Narawal, from his office on Bollux, governs loosely, because he can’t get away with anything more.

Three inhabited worlds within the sector (Cretaceous, Carstairs and Redugun) are not Federation members. One of Governor Narawal’s chief objectives has been to win them over — Cretaceous and Redugun in particular, because of their valuable resources.

But Cretaceous and Carstairs enjoy their independence. And, while the Grand Dukes of Redugun would like to join, they refuse to give up their slaveholding — which is a violation of Federation law.

However, the governor has more important problems right now, because internal politics are reaching the boiling point. Bannar and Drayhoah, both Federation members, are fighting a proxy war on Dunsel; thanks to Patrol operatives, the Federation knows that this is more serious than it appears.

And two member planets that are economic giants — Acropolis and Survias — have internal policies that are against Federation policy, though not quite in violation of actual sector law. Acropolis' treatment of clones would be considered slavery if not for a loophole in Federation law. And the dictator of Survias is not only terrorizing her own people, but may be a danger to other planets. If only one of these worlds were a problem, Narawal could send in the Federation fleet and force changes. But Narawal knows that the two powerful worlds have agreed to aid each other against any Federation interference . . .

Corporate State

The Old Frontiers Sector is almost wholly controlled by BYTE, Inc., which is itself a subsidiary of Cosmopolis, Ltd, which is owned jointly by Freres Delacorte Pty. and the Arttronics Corporation . . . which are both fronts for Goliath Weaponry, GmbH. Though the sector is fully tied into the corporate web, it is also a hotbed of intrigue, as the interests of various corporate divisions and sub-operations cross and conflict here, far from the home office.

Corporate headquarters for the sector are on Byte, but every world has various local offices for one subdivision or another. Bollux, in particular, is vitally important because of its central position.

Intercompany politics are fierce. Sheba, through its soon-to-be new prince, is the target of a takeover attempt, as is Cretaceous. The religious worlds of Bannar and Drayhoah are among the few non-corporate worlds in the sector, and as a result are disliked and distrusted.

And Goliath Weaponry is increasing its influence in the whole sector in a very heavy-handed way. The ASF, on Nautilus, is a Goliath project. When the people of Lorn rebelled against a Goliath subsidiary, the company released an untested bioweapon — the creeps — rather than negotiate a settlement. Goliath is also using the planet Roentgen as a test site for weapons and survival equipment. And there is a rumor that the anomalies of Gith were the result of a weapons experiment gone wrong.



Increase Control Factor of all worlds by 1 if the sector is ruled by a corporate state. If a local government description is inconsistent with corporate rule, the GM may ignore it, decide that it is one of the few non-corporate worlds, or assume that it's a charade of



Animal Descriptions

Where detailed descriptions of animals are given, they follow the format of the *GURPS Bestiary*. Most of the headings are self-explanatory. Size refers to size in hexes. Habitats are abbreviated as follows:

- A = Arctic
- D = Desert, including all dry areas and scrub woodlands
- F = Forest, including all temperate forests
- FW = Fresh-Water Aquatic
- J = Jungle, including any tropical forest
- M = Mountain
- P = Plains, including all grassland, steppes, and so on
- S = Swamp
- Sub = Subterranean
- SW = Salt-Water Aquatic

* means a special ability or attack — see text.

indicates exceptions to the given entry — see text.

Tech Levels

We have assumed that the base Tech Level of the campaign is 10. If your campaign has a different TL, you can scale the TLs given accordingly. Or, for a campaign with a base TL of 11 or 12, you may keep all the worlds exactly as described, since the Old Frontiers sector is intended to be a "backwater" area anyway. It would be appropriate for these planets to have the TLs described, even if the central areas of interstellar civilization were more advanced.

Outposts, mining camps, and so on generally have equipment with the base TL of the campaign, but very limited manufacturing or repair facilities. If a world has a low general TL but higher-TL items can be bought there but not built or repaired, the higher TL will be shown in parentheses: TL9(10) would mean a TL9 world that had some TL10 equipment.

Maps

On the following pages are star maps of the whole Old Frontier, for use in different types of campaigns. All maps are drawn to standard scale — 1 parsec per square — but if worlds are more distant in your campaign, just change the scale.

If you've got an ongoing campaign, you can use the entire Old Frontiers Sector as a unit. It can serve as the backdrop of an entire campaign, or simply as a jumping-off place for a campaign set in the adjacent frontier areas. Alternatively, you can drop the individual worlds in wherever they'll do your adventures the most good.

Normal-Space Map

Page 5 is a map of the Old Frontiers Sector for normal space. This will be most useful for campaigns where ships use warp drive. No worlds are shown except for those named in the atlas. The GM may add navigational hazards appropriate to his own campaign.

Jumpline Map

Page 6 is a map of the Old Frontiers Sector showing jumplines. We have assumed that jumplines more than 10 parsecs long are very rare.

This map is for campaigns where ships use a jump drive that only works along jumplines. If jump *points* are used, the GM should use the map on p. 5 and add appropriate points.

Because many inhabited worlds have no jumplines leading directly to other useful worlds, a number of extra "waystation" systems are shown on this map. These are shown by the star names, since none of their worlds are important, and are differentiated by parentheses. If a waystation star has no planets, it is shown by a *. Waystation systems without a * have at least one gas giant, and at least one rock-ball where an emergency landing is possible.

Distance Table

Page 7 is a table of the distances, in parsecs, between all 27 systems described in this book. It is generally the only "map" you need for hyperspace travel, and can be used in conjunction with either of the other two maps when figuring travel times.

the corporation. For instance, the bosses of Redugun like to call themselves Grand Dukes and play at being nobles, but they're more concerned with stock options than swashbuckling.

Imperial Galaxy

The Old Frontiers Sector lies at the periphery of the Empire. There is no significant expansion going on past or through the sector. It is something of a backwater in Imperial politics, and most of its inhabitants like it that way. The Empire has been content to leave local governments alone, letting them deal with their planets as they choose, as long as they pay their taxes.

The Imperial satrap for the Old Frontiers is Prince Athos O'Campbell. In his late forties, the Prince is personally likeable. He is decadent and not especially bright, but his pleasures are all of the harmless variety. Costly, and often shocking, but harmless.

The satrap's residence is on Pleroo. A large area surrounding it is off-limits to unauthorized personnel. An elite unit of Imperial Marines is entrusted with the safety of the satrap when he is on Pleroo, and guards the residence area even when he is not. He spends a lot of time hunting on Cretaceous, wenching on Acropolis, and generally misbehaving, along with his retinue of sycophants, on the pleasure-world of Alhambra.

All Imperial agencies in the sector are unusually corrupt, even by Imperial standards. The dreaded Imperial Secret Police is, in a manner of speaking, an exception. ISP officers and agents are venal, profligate, and often sadistic. But they remain loyal to the Sector Head of ISP, Duke Spiros Kristopoulos — known, though not to his face, as Duke Spook. Oddly, in the backstabbing arena of Imperial politics, Duke Spook appears to be personally honest, clean-living, and devoted to the Satrap. He is also intelligent, devious and ruthless . . . a deadly enemy. The Duke is probably the only reason the Satrap has survived this long.

As a rule, he and his ISP do not concern themselves with *any* sort of law enforcement; they deal only with conspiracies and threats to the Satrap's position. But if (for instance) the Satrap happens to complain to the Duke that there's too much smuggling around Redugun, the ISP will be on the job, infiltrating the local criminal organizations *and* the Patrol. The ISP is everywhere; the data banks of Byte are one of their most important resources.

Here, as everywhere, the Empire is heavy-handed with rebels. Lorn was devastated by the creeps when it tried to revolt. It is rumored that the natives of Roentgen were destroyed, not by civil war, but by the Imperial Navy. Al-Jebel is full of political prisoners.

Increase Control Factor of all worlds by 1 if the sector is part of an empire. Should the Satrap be replaced by a more competent leader, Control Factors will soon increase by another 1. But if anything happens to Duke Spook, Control Factors will *drop* one, at least for a while.

Organizations

The major organizations in the sector will depend on the overall government in your campaign. (Of course, if the sector is anarchistic, no government organizations exist on any scale larger than planetary police.)

The Patrol will be present, in one form or another, unless there is no political organization at all. If the sector is anarchistic, any mention of a Patrol base refers to an powerful *planetary* police force.

Survey maintains an office in the region, on Bollux. Even though there is no active exploration going on, the Old Frontiers area does border on unknown territory, and Survey keeps a few ships in the area and does its best to collate information from returning travelers.

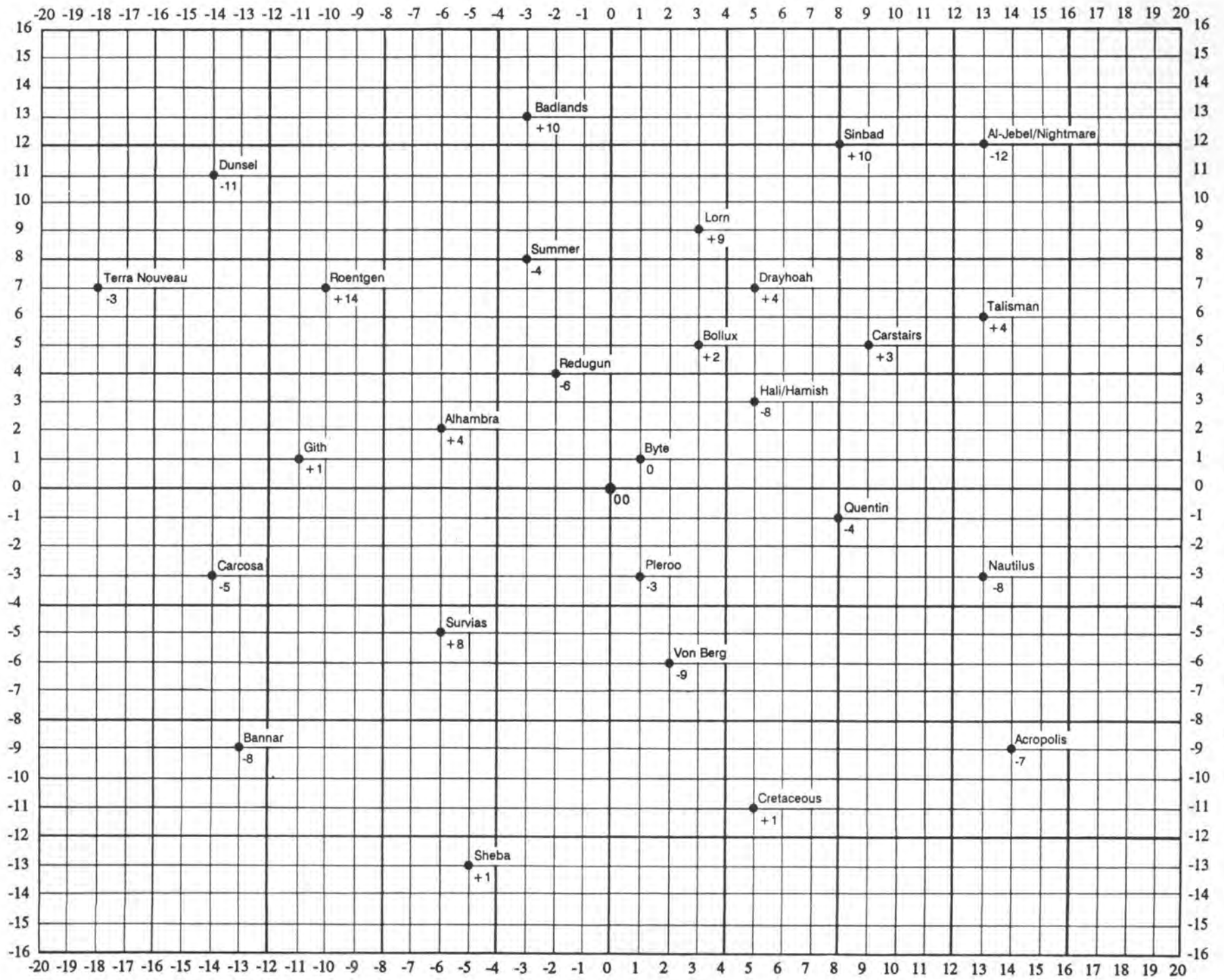
The Navy and other military services may or may not be present. In an anarchistic situation, references to naval or military bases refer to planetary navies, or can be ignored entirely.

Mercenary companies flourish in the Old Frontiers area. Even if the sector is tightly governed, mercenaries are tolerated because they find work in the areas beyond the sector . . . though the Mercenary Regulatory Agency keeps a *very* close eye on them. By far the dominant merc force in the sector is the Summersun Mercenary Co-op (see p. 54).

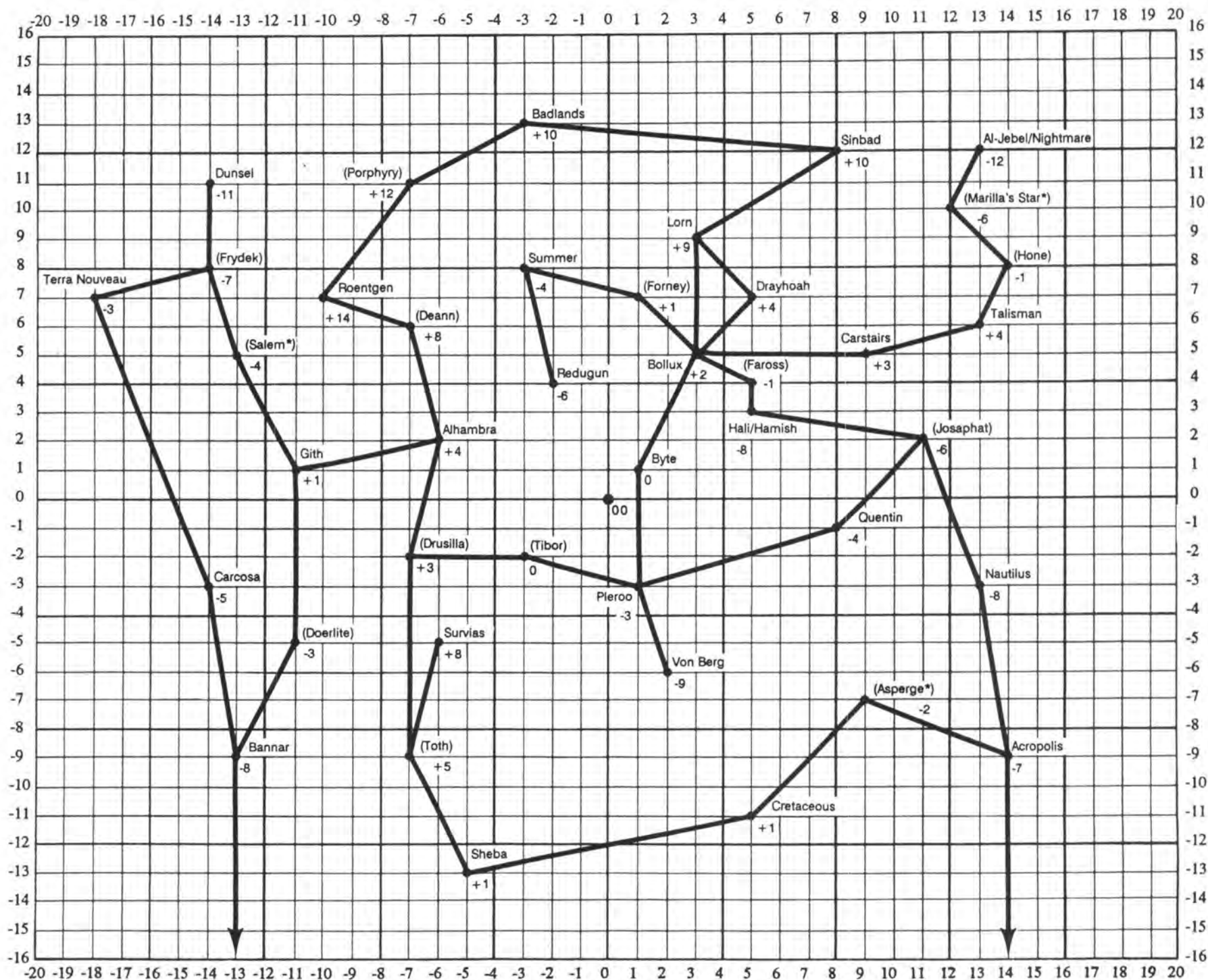
Civilian organizations of all types exist in the area. Notable is the Escott Institute, on Pleroo (p. 42).

Criminal organizations, of course, are everywhere. The Organization is strongest on Badlands, which it controls entirely, and on Bollux. It is very weak on Dunsel, where the religious wars are interfering with business-as-usual.

Old Frontiers Normal-Space Map



Old Frontiers Jumphline Map



Distances Between Worlds in the Old Frontiers

#	World Name	Coordinates			Distances to Numbered Worlds (in parsecs)													
		X	Y	Z	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Acropolis	14	-9	-7	0.0	25.3	21.6	27.8	27.0	19.9	17.8	28.7	17.9	12.2	21.4	34.6	28.1	15.0
2	Alhambra	-6	2	4	25.3	0.0	26.8	11.4	17.7	9.7	7.7	13.0	15.3	17.3	12.1	19.2	5.9	16.3
3	Al-Jebel/Nightmare	13	12	-12	21.6	26.8	0.0	16.0	33.7	18.6	20.2	31.7	17.0	27.6	18.6	27.0	29.4	12.7
4	Badlands	-3	13	10	32.6	12.9	27.2	0.0	30.1	12.8	16.1	24.5	16.0	26.9	11.7	23.8	17.0	22.1
5	Bannar	-13	-9	-8	27.0	17.7	33.7	24.2	0.0	23.5	19.0	6.8	28.3	20.2	26.9	20.2	13.6	21.6
6	Bollux	3	5	2	19.9	9.7	18.6	10.0	23.5	0.0	4.9	20.0	6.1	16.2	3.5	22.2	14.6	10.4
7	Byte	1	1	0	17.8	7.7	20.2	16.1	19.0	4.9	0.0	16.3	9.4	12.7	8.2	21.1	12.0	9.2
8	Carcosa	-14	-3	-5	28.7	13.0	31.7	19.4	6.8	20.0	16.3	0.0	25.6	21.5	23.3	15.2	7.8	20.1
9	Carstairs	9	5	3	17.9	15.3	17.0	14.4	28.3	6.1	9.4	25.6	0.0	16.6	4.6	27.6	20.5	11.9
10	Cretaceous	5	-11	1	12.2	17.3	27.6	25.3	20.2	16.2	12.7	21.5	16.6	0.0	18.2	31.4	20.0	16.6
11	Drayhoah	5	7	4	21.4	12.1	18.6	10.0	26.9	3.5	8.2	23.3	4.6	18.2	0.0	24.5	17.3	12.6
12	Dunsel	-14	11	-11	34.6	19.2	27.0	11.2	20.2	22.2	21.1	15.2	27.6	31.4	24.5	0.0	15.9	20.8
13	Gith	-11	1	1	28.1	5.9	29.4	14.4	13.6	14.6	12.0	7.8	20.5	20.0	17.3	15.9	0.0	18.5
14	Hali/Hamish	5	3	-8	15.0	16.3	12.7	12.8	21.6	10.4	9.2	20.1	11.9	16.6	12.6	20.8	18.5	0.0
15	Lorn	3	9	9	26.5	12.4	23.5	7.2	29.5	8.1	12.2	25.1	9.4	21.6	5.7	26.3	18.0	18.1
16	Nautilus	13	-3	-8	6.2	23.0	15.5	22.6	26.7	16.2	15.0	27.2	14.2	14.5	17.5	30.6	25.9	10.0
17	Pleroo	1	-3	-3	14.9	11.1	21.2	16.5	16.0	9.6	5.0	15.1	12.8	9.8	12.8	22.0	13.3	8.8
18	Quentin	8	-1	-4	10.4	16.4	16.1	17.8	22.8	9.8	8.3	22.1	9.3	11.6	11.7	26.0	19.7	6.4
19	Redugun	-2	4	-6	20.6	11.0	18.0	9.1	17.1	9.5	7.3	13.9	14.2	18.0	12.6	14.8	11.8	7.3
20	Roentgen	-10	7	14	35.7	11.9	35.1	9.2	27.4	17.8	18.8	21.8	22.0	26.8	18.0	25.6	14.4	26.9
21	Sheba	-5	-13	1	21.0	15.3	33.4	26.1	12.7	19.7	15.3	14.7	22.9	10.2	22.6	28.3	15.2	20.9
22	Sinbad	8	12	10	27.7	18.2	22.6	11.0	34.7	11.7	16.4	30.6	9.9	24.9	8.4	30.4	23.7	20.3
23	Summer	-3	8	-4	24.2	10.4	18.3	5.0	20.1	9.0	9.0	15.6	14.2	21.2	11.4	13.4	11.7	10.2
24	Survias	-6	-5	8	25.3	8.1	32.4	18.2	17.9	14.7	12.2	15.4	18.7	14.4	16.8	26.1	10.5	21.0
25	Talisman	13	6	4	18.6	19.4	17.1	17.5	32.3	10.2	13.6	29.8	4.2	19.0	8.1	31.3	24.7	14.7
26	Terra Nouveau	-18	7	-3	36.0	14.8	32.7	16.2	17.5	21.7	20.1	11.0	27.7	29.5	24.0	9.8	10.0	23.9
27	Von Berg	2	-6	-9	12.5	17.2	21.3	19.6	15.3	15.6	11.4	16.8	17.7	11.6	18.6	23.4	17.8	9.5
#	World Name	X	Y	Z	15	16	17	18	19	20	21	22	23	24	25	26	27	
1	Acropolis	14	-9	-7	26.5	6.2	14.9	10.4	20.6	35.7	21.0	27.7	24.2	25.3	18.6	36.0	12.5	
2	Alhambra	-6	2	4	12.4	23.0	11.1	16.4	11.0	11.9	15.3	18.2	10.4	8.1	19.4	14.8	17.2	
3	Al-Jebel/Nightmare	13	12	-12	23.5	15.5	21.2	16.1	18.0	35.1	33.4	22.6	18.3	32.4	17.1	32.7	21.3	
4	Badlands	-3	13	10	7.3	28.9	21.0	22.6	18.4	10.0	27.6	11.0	14.9	18.4	18.5	20.7	27.3	
5	Bannar	-13	-9	-8	29.5	26.7	16.0	22.8	17.1	27.4	12.7	34.7	20.1	17.9	32.3	17.5	15.3	
6	Bollux	3	5	2	8.1	16.2	9.6	9.8	9.5	17.8	19.7	11.7	9.0	14.7	10.2	21.7	15.6	
7	Byte	1	1	0	12.2	15.0	5.0	8.3	7.3	18.8	15.3	16.4	9.0	12.2	13.6	20.1	11.4	
8	Carcosa	-14	-3	-5	25.1	27.2	15.1	22.1	13.9	21.8	14.7	30.6	15.6	15.4	29.8	11.0	16.8	
9	Carstairs	9	5	3	9.4	14.2	12.8	9.3	14.2	22.0	22.9	9.9	14.2	18.7	4.2	27.7	17.7	
10	Cretaceous	5	-11	1	21.6	14.5	9.8	11.6	18.0	26.8	10.2	24.9	21.2	14.4	19.0	29.5	11.6	
11	Drayhoah	5	7	4	5.7	17.5	12.8	11.7	12.6	18.0	22.6	8.4	11.4	16.8	8.1	24.0	18.6	
12	Dunsel	-14	11	-11	26.3	30.6	22.0	26.0	14.8	25.6	28.3	30.4	13.4	26.1	31.3	9.8	23.4	
13	Gith	-11	1	1	18.0	25.9	13.3	19.7	11.8	14.4	15.2	23.7	11.7	10.5	24.7	10.0	17.8	
14	Hali/Hamish	5	3	-8	18.1	10.0	8.8	6.4	7.3	26.9	20.9	20.3	10.2	21.0	14.7	23.9	9.5	
15	Lorn	3	9	9	0.0	23.1	17.1	17.1	16.6	14.1	24.7	5.9	14.4	16.7	11.6	24.3	23.5	
16	Nautilus	13	-3	-8	23.1	0.0	13.0	6.7	16.7	33.4	22.5	24.0	19.8	24.9	15.0	33.0	11.4	
17	Pleroo	1	-3	-3	17.1	13.0	0.0	7.3	8.2	22.6	12.3	21.0	11.7	13.2	16.6	21.5	6.8	
18	Quentin	8	-1	-4	17.1	6.7	7.3	0.0	11.4	26.7	18.4	19.1	14.2	18.9	11.7	27.2	9.3	
19	Redugun	-2	4	-6	16.6	16.7	8.2	11.4	0.0	21.7	18.6	20.5	4.6	17.1	18.1	16.6	11.2	
20	Roentgen	-10	7	14	14.1	33.4	22.6	26.7	21.7	0.0	24.4	19.1	19.3	14.0	25.1	18.8	29.0	
21	Sheba	-5	-13	1	24.7	22.5	12.3	18.4	18.6	24.4	0.0	29.6	21.7	10.7	26.3	24.2	14.1	
22	Sinbad	8	12	10	5.9	24.0	21.0	19.1	20.5	19.1	29.6	0.0	18.2	22.1	9.8	29.5	26.9	
23	Summer	-3	8	-4	14.4	19.8	11.7	14.2	4.6	19.3	21.7	18.2	0.0	17.9	18.0	15.1	15.7	
24	Survias	-6	-5	8	16.7	24.9	13.2	18.9	17.1	14.0	10.7	22.1	17.9	0.0	22.3	20.2	18.8	
25	Talisman	13	6	4	11.6	15.0	16.6	11.7	18.1	25.1	26.3	9.8	18.0	22.3	0.0	31.8	20.8	
26	Terra Nouveau	-18	7	-3	24.3	33.0	21.5	27.2	16.6	18.8	24.2	29.5	15.1	20.2	31.8	0.0	24.6	
27	Von Berg	2	-6	-9	23.5	11.4	6.8	9.3	11.2	29.0	14.1	26.9	15.7	18.8	20.8	24.6	0.0	

Acropolis (Zeus III)

Acropolis is a populous and long-settled world, and a very Earthlike one. Though it has even less land area than Earth, a higher percentage of the land is usable. The three large continents (Hera, Aphrodite and Athena) and the large island group known as the Muses are all fully settled. Even the badlands of central Hera are being reclaimed.

Cloning is very common on Acropolis, and this has had a number of social effects. An individual has a legal right to control his own "genotype" on Acropolis. This means that a person may not be cloned without his own consent . . . but also that he may have himself cloned as many times as he can afford. If a clone is decanted in infant form, it has no civil rights unless its owner (the original person, or whoever the clone was sold to) chooses to free it. An original *may* sell cell samples to others wishing to raise his (or her) clone.

sold. There is also a thriving black market in illegal clones, from cell samples taken without the owner's consent.

Acropolis law requires everyone born (or decanted) on the planet to be tattooed on the forehead to show their status; these tattoos show up only under ultraviolet light, but UV radiators are everywhere and Police carry UV wands to let them read ID tattoos. Offworlders, of course, aren't required to have tattoos, but will constantly have to prove that they *are* from off-planet.

Another facet of life on Acropolis: Those who can afford it will often have themselves cloned repeatedly, freeing the clones and raising them as part of a large and growing clone family. This becomes especially interesting when an intelligent, talented person, who gets along well with "himself," multiplies his talents manifold. The law firm of Niemann, Niemann, Niemann, Niemann, Niemann is just one example.

Acropolis-registered Free Traders are likewise often crewed by a clone family of a dozen or so. All the crew, from the old Captain to the ten-year-old cabin boy, will have the same face. Or two or three people with complimentary personalities and talents may form a family, each cloning himself a dozen times or so.

Some clone families keep the exact same name and distinguish themselves by numbers (Joe-4 Bekosky). Others use different middle names; still others adopt other ways of distinguishing themselves. And some make no effort at all to tell each other apart; they consider themselves interchangeable, even within the family. When outsiders meet clones like this, an IQ roll is required to tell them apart, if it matters (+3 for Empathy or long acquaintance).

Adventures on Acropolis

Cellnappers. One of the PCs — the most physically attractive — is drugged or mugged in an Acropolis alley. He (or she) comes to, without possessions but otherwise none the worse for wear. However, a medscanner reading reveals that the victim was also subjected to an intestinal probe, to collect body cells suitable for cloning! It soon comes out that this happens quite a bit on Acropolis. It's entirely illegal.

The PCs can ignore the situation if they like. But will they, knowing that clone "children" of one of their number may be doomed to a life of who knows

what sort of slavery?

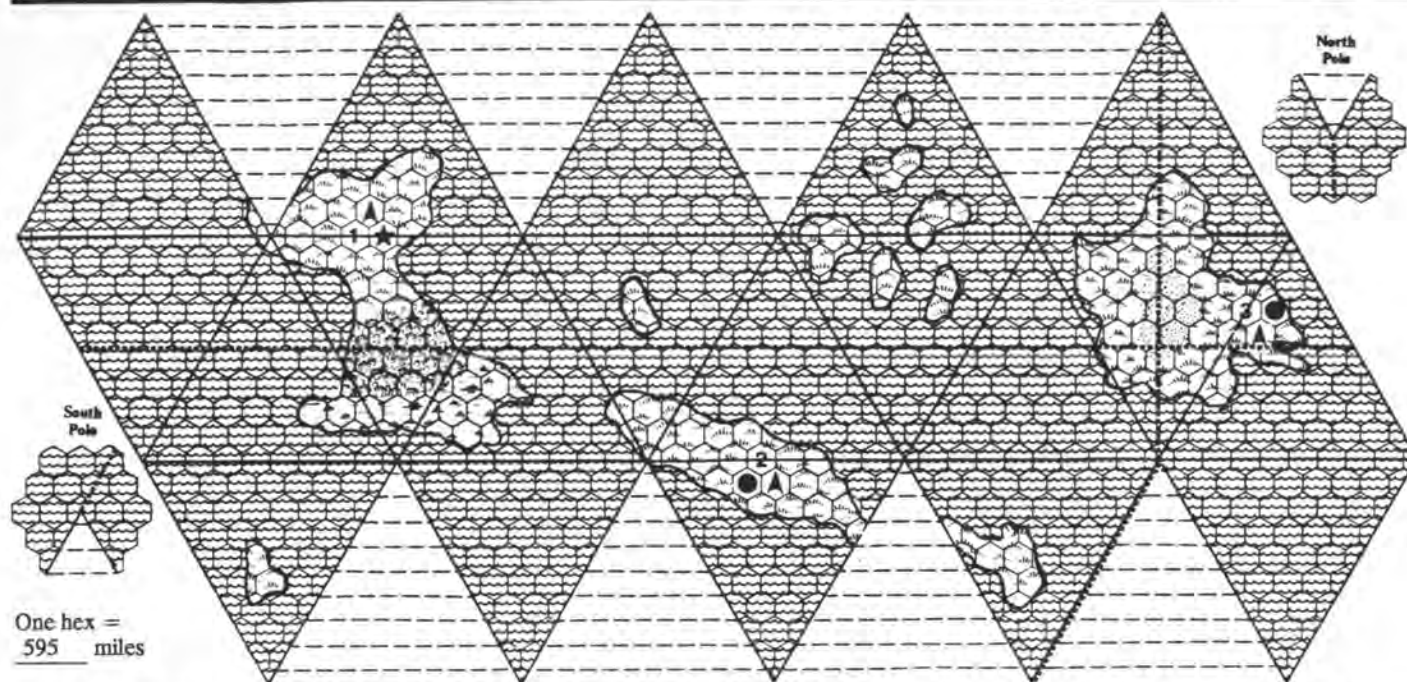
The Old Switcheroo. A constant worry of Acropolite law-enforcement agencies is that unauthorized cell samples will be used to create doubles — possibly mind-controlled doubles — of important citizens. And indeed, there's such a plot right now. The PCs are involved in spite of themselves; they are innocent visitors, but the real plotters have set them up as a "red herring." The PCs can't leave Acropolis until the real plotters are caught, and must cooperate with the police to hasten that day.



This all means that clone and clone-related technology is cheap on Acropolis; all cloning costs are only 75% normal. It also means that (for instance) intelligent or attractive visitors will be invited to sell cell samples.

And it means that much of the menial labor on Acropolis is done by "dupes" — cloned slaves. The Acropolites see nothing wrong with this. Nor do the dupes; they've been conditioned from birth to see this as the normal state of affairs. Thus, slavery is legal here, for clones only, and clone slaves can be bought and

PLANETARY RECORD: Acropolis (Zeus III)



Planet type Earthlike Diameter 8,500 mi. Gravity 1.15 G Density 5.9 Composition Medium-Iron
 Axial Tilt 18° Seasonal Variation Minor Length of Day 17 hours Length of Year 541 days/ 383 Earth days
 Atmosphere: Pressure 1.05 (Standard) Type and Composition Nitrogen 80%, Oxygen 19%, Others 1%
 Climate Earth-normal Temperatures at 30° latitude: Low 58° Average 79° High 100°
 Surface Water 82% Humidity 57% Primary Terrain Plains and forest
 Mineral Resources: Gems/Crystals Absent Rare Minerals Absent Radioactives Absent
 Heavy Metals Scarce Industrial Metals Plentiful Light Metals Scarce Organics Ample
 Moons One small moon — Hermes

Biosphere: Dominant life form Warm-blooded, scaled mammals
 Other significant life forms Standard earthlike ecology

Civilization: Population(s) 7.3 billion (PR 9) Tech Level(s) 10 Control Rating 3
 Society Athenian democracy — but clones may be held in slavery
 Starports Class V in orbit; Class III at Athens, Thermopylae and Herasport
 Installations Several universities; Jerrik Biotechnics genetic research facility
 Economic/Production Exports food and some industrial equipment; imports gems, radioactives and other minerals

Other notes: Map key: 1. Athens (capital) 2. Thermopylae 3. Herasport
Cloning is common on Acropolis; many wealthy citizens raise clones instead of children

System Information:

Star Name Zeus Type G3 V Location Old Frontiers 14/-9/-7
 Biozone 0.8-1.2 Inner Limit 0 Number of Planets 7

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Phaeton	1	.2	Hot rockball	8,300	4.9	.93	None	—
Hephaestus	2	.6	Hot rockball	2,800	4.9	.31	None	—
Acropolis	3	1.0	Earthlike	8,500	5.9	1.15	Oxygen-Nitrogen	Detailed above
—	4	1.8	(Empty orbit)	—	—	—	—	—
Atlas	5	3.4	Gas giant	37,500	.7	.60	Hydrogen-Helium	Oort belt
Perseus	6	6.6	Rockball	4,250	5.7	.55	None	—
Pan	7	13.0	Gas giant	29,900	.9	.62	Hydrogen-Helium	—
Charon	8	25.8	Icy rockball	9150	3.0	.63	Very thin reducing	—

Alhambra (Golden IV)

The Alhambra Pleasure Planet is known for hundreds of parsecs as a vacation spot without parallel. Originally, the world was lifeless. Its weather was pleasant, and its oceans were beautiful . . . but the atmosphere was pre-Terrestrial, with no oxygen.

The empty planet was purchased by a consortium of entertainment corporations. Thanks to their efforts, Alhambra is now lively enough for even the most jaded tastes. The giant pressurized pleasure domes of New Xanadu provide a wide variety of both decadent and family amusements. The low gravity makes an impressive range of challenging yet relatively safe "out-door" sports possible as well. And regular shuttles from the planet's starport takes visitors to several orbiting stations — or one of Alhambra's three natural moons — for even more exotic entertainments.

In addition to its regular features, Alhambra is the site of several annual or semi-regular festivals and conventions, including the week-long annual "Mother Earth Reunion" convention, at which visitors of Terran descent honor their Terrestrial roots with games, banquets and other festivities.

Only about 4 million of Alhambra's population are permanent inhabitants. The rest are guests. Their number ranges from 5-6 million during the off season to 20 million or more during Earth Reunion.

Alhambra is not cheap. Even those visiting the least expensive domes can expect to spend an average of \$5,000 per person per day, not counting transit costs to and from the planet. The higher-class amusement centers can run into the millions of credits per day per guest, especially the high-stakes gambling

casinos and the exclusive resort called Sybaros, on the opposite side of the world from the "public" domes.

Expensive though it is, Alhambra has never wanted for visitors since it opened its domes to pleasure-seekers. Even during wartime, Alhambra has never closed its domes — indeed, it is then that it has been in most demand as an R&R spot.

A long-term terraforming project is in progress on Alhambra; within a few hundred years, it may be possible to tear the domes down and walk free on a garden world.

The Asteroids

Alhambra has two asteroid belts. Neither one, as far as it's known, has anything of unusual value, but miners came to the system after the Pleasure Planet opened for business. If nothing else, at least they can spend all their money without leaving the system. The Consortium welcomes the miners, though they're encouraged to spend their time in Miner's Rest, which caters to their particular pleasures and vices, rather than the domes patronized by family vacationers or the million-credit crowd.

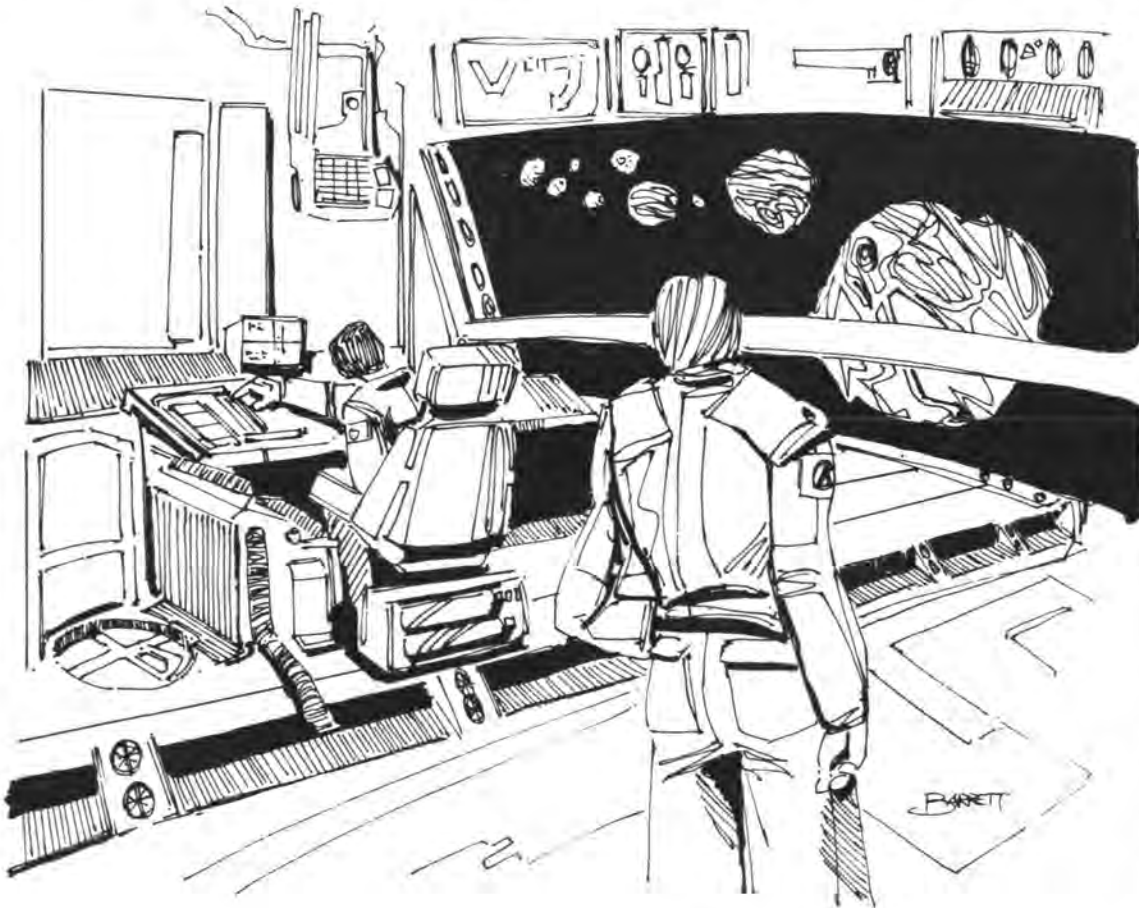
Adventure on Alhambra

The Sting. While visiting Alhambra, one of the PCs has an incredible — even unbelievable — run of bad luck. He is left destitute, and the casino's collection agency is now claiming his share in the party's ship and any other common property the group owns. If the spacers don't come to the conclusion that the game was rigged, they haven't thought things through.

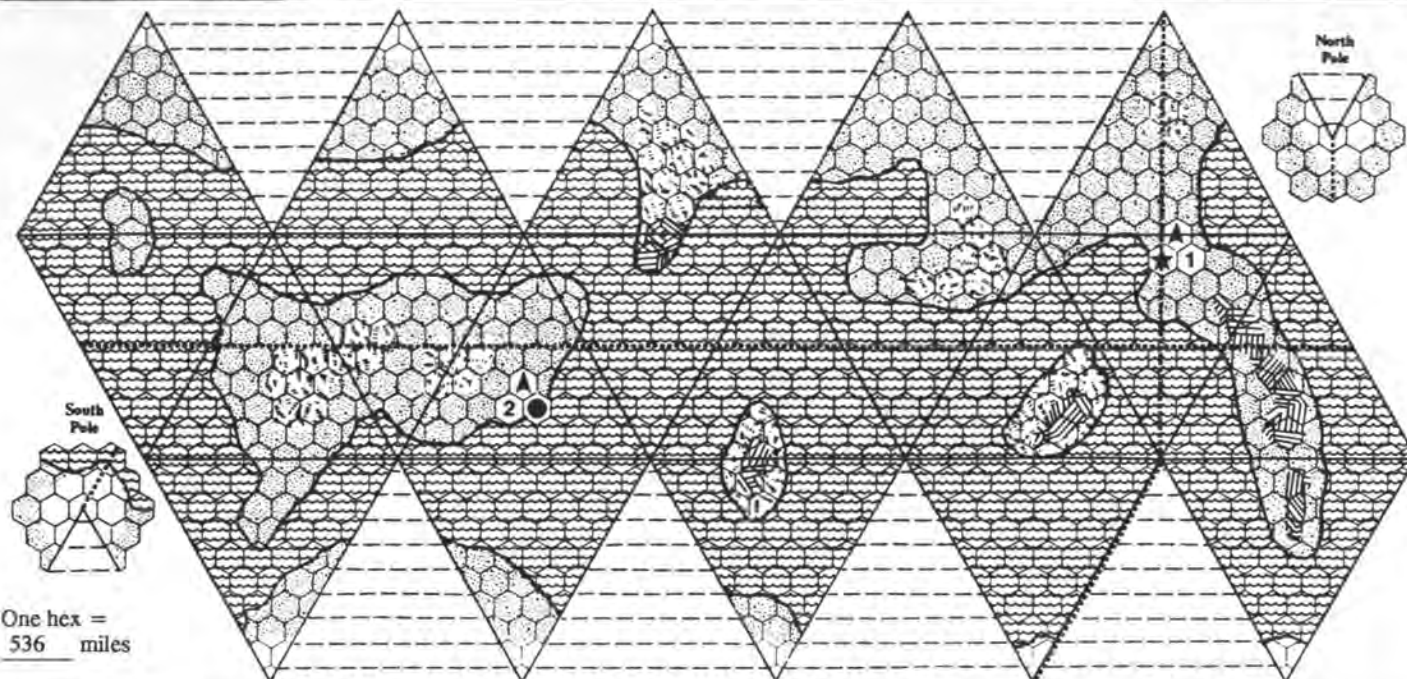
Possible complications: The whole affair was arranged by the victim's Enemy; the whole affair was arranged because one of the PCs unknowingly has evidence that the planet has enough gems and precious metals to start a gold rush; the whole affair was a test of a top-secret psionic Bad Luck Generator by a scientific team from the Escott Institute. The researchers would like to make amends, but they can't reveal their secret!

Or perhaps the whole thing is an attempt to hold the PCs on the planet long enough to interfere with whatever their real mission is. In that case, another PC is likely to develop a romantic entanglement; another wins an all-expense-paid week at Sybaros, the private pleasure dome; yet another is mixed up in a saloon brawl and slightly injured.

Exciting place, Alhambra!



PLANETARY RECORD: Alhambra (Golden IV)



Planet type Hostile terrestrial Diameter 7,650 mi. Gravity .86 G Density 4.9 Composition Medium-Iron
 Axial Tilt 12° Seasonal Variation Minor Length of Day 17 hours Length of Year 6,276 days/ 12 Earth years
 Atmosphere: Pressure 1.18 (Standard) Type and Composition Reducing — CO₂ 84%, Methane 6%, H₂ 8%, N₂ 2%
 Climate Earth-normal Temperatures at 30° latitude: Low 60° Average 81° High 102°
 Surface Water 62% Humidity 54% Primary Terrain Rocky desert
 Mineral Resources: Gems/Crystals Unknown Rare Minerals Unknown Radioactives Unknown
 Heavy Metals Plentiful Industrial Metals Adequate Light Metals Adequate Organics Adequate
 Moons 3 small moons — Vegas, Carlo, and Atlantic

Biosphere: Dominant life form None
 Other significant life forms None

Civilization: Population(s) 4.2 million permanent residents (PR 6) Tech Level(s) 10 Control Rating 4/6 *

Society Corporate — administered by Alhambra Pleasure Consortium, Inc.

Starports Class III at New Xanadu; Class II at Sybaros

Installations Assorted casinos, amusement parks, theaters, arenas, and other entertainment facilities

Economic/Production Entertainment

Other notes: Map key: 1. New Xanadu (Capital) 2. Sybaros (Private corporate starport)

* General Control Rating 4; Weapons Control Rating 6.

System Information:

Star Name Golden Type G2 III Location Old Frontiers -6/2/4
 Biozone 3.1-4.7 Inner Limit 0.1 Number of Planets 10

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Scarlare	1	.6	Hot rockball	2,300	2.7	.14	None	Tide-locked
—	2	.8	Asteroid belt	—	—	—	—	—
—	3	1.0	(Empty orbit)	—	—	—	—	—
Ocellatus	4	1.4	Huge gas giant	210,000	2.4	11.54	Hydrogen-Methane	6 giant moons
Blackbar	5	2.2	Hostile terrestrial	4,200	5.2	.50	Dense Fluorine	—
Alhambra	6	3.8	Hostile terrestrial	7,650	4.9	.86	Reducing	Detailed above
Vegas	6a	3.8	Rockball	1,100	4.9	.12	None	Low-G death sports
Carlo	6b	3.8	Rockball	1,950	6.9	.31	None	Gambling in its every form
Atlantic	6c	3.8	Rockball	2,300	5.2	.27	None	Requires liability waiver
Salvin	7	7.0	Gas giant	35,500	2.0	1.62	Hydrogen-Helium	Spectacular ring
—	8	13.4	Asteroid belt	—	—	—	—	—
Jurupar	9	26.2	Iceball	2,150	4.7	.23	None	—
Dempsey	10	51.8	Gas giant	75,000	.9	1.55	Hydrogen	—
Festivum	11	103.0	Gas giant	81,500	1.3	2.43	Hydrogen	Faint ring
Severum	12	205.4	Icy rockball	13,250	6.2	1.88	Trace ammonia	Extensive caverns
Krib	13	410.2	Gas giant	47,000	1.6	1.72	Hydrogen-Methane	Faint ring

Al-Jebel (Mecca III) — *Prohibited*

This inhospitable world, very hot and with little surface water, was colonized by a neo-Moslem sect. Their descendants still eke out an existence on the harsh world, neither needing nor wanting offworld contact. The tribal/clan structure of the planet's loose government is more than sufficient for its small population. Every 10 planetary years, the tribes gather to elect their overall ruler, the Sheik of Al-Jebel, from among their own tribal sheiks. The Sheik rules from Irem, one of the world's two cities.

Al-Jebel wants no foreign influence, and the Patrol helps enforce this. In return, the Sheik gave up a huge area of worthless desert for a Patrol base and high-security prison facility located

on the planet's equator, far from the inhabited areas near the small polar caps. The prison holds offenders against interstellar law, as well as dangerous criminals who have escaped repeatedly from other prisons. Because of the harshness of the planet and the fact that the only starport is in Patrol hands, Al-Jebel Prison is considered as close to escape-proof as a prison can be.

Adventure on Al-Jebel

Jailhouse Blues. If lawbreaking PCs are caught by the Patrol, send them to Al-Jebel, and let *them* find out if the planet is really escape-proof.

Nightmare (Mecca II) — *Prohibited*

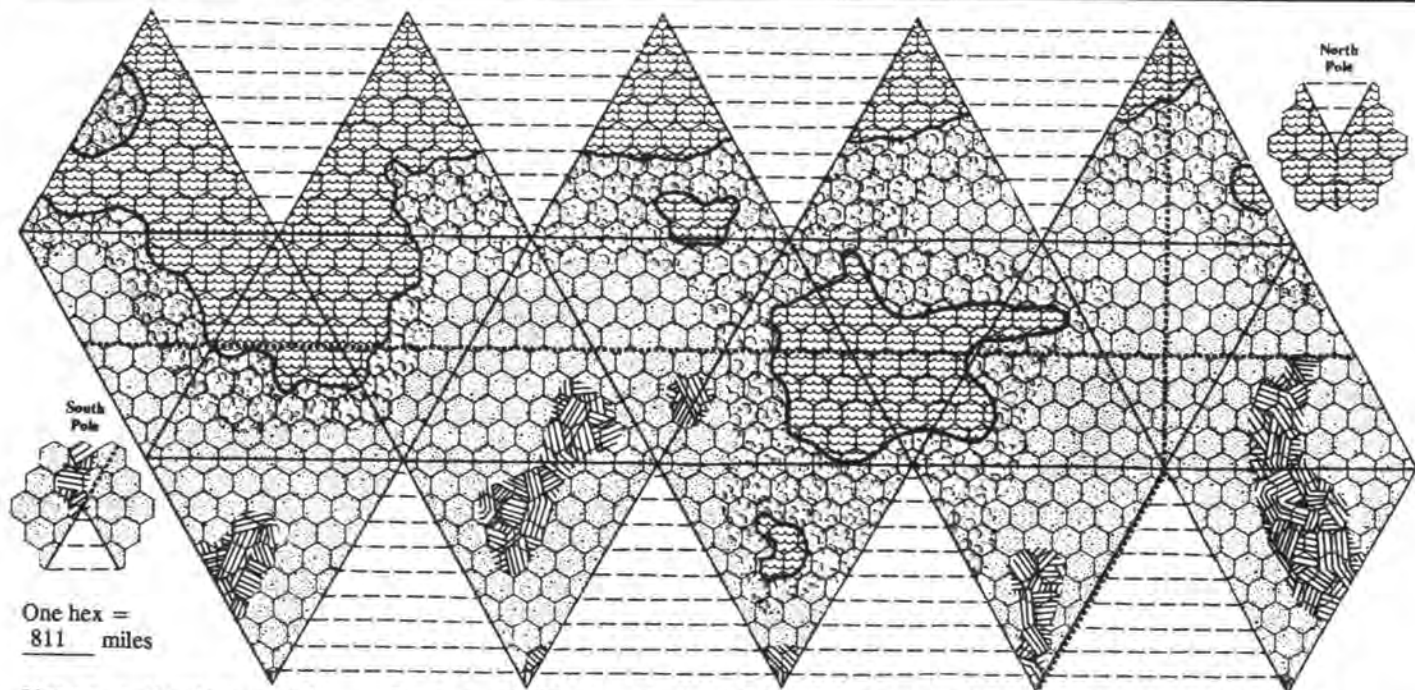
This hostile terrestrial world, sharing Al-Jebel's system, is of interest only because orbital energy readings show several operational Precursor sites. However, the few expeditions that have attempted landings in the past have died to a man.

Hazardous conditions include deadly atmosphere under high pressure; very strong winds with zero visibility; and, of course, the heat and high gravity. The native life is very active and aggressive (dense jungle near the Precursor energy readings; life metabolizes chlorine; no details yet known). Survey continues to research ways to explore these sites, possibly with military assistance. A Patrol orbital watch maintains the Prohibited status.

Adventure on Nightmare

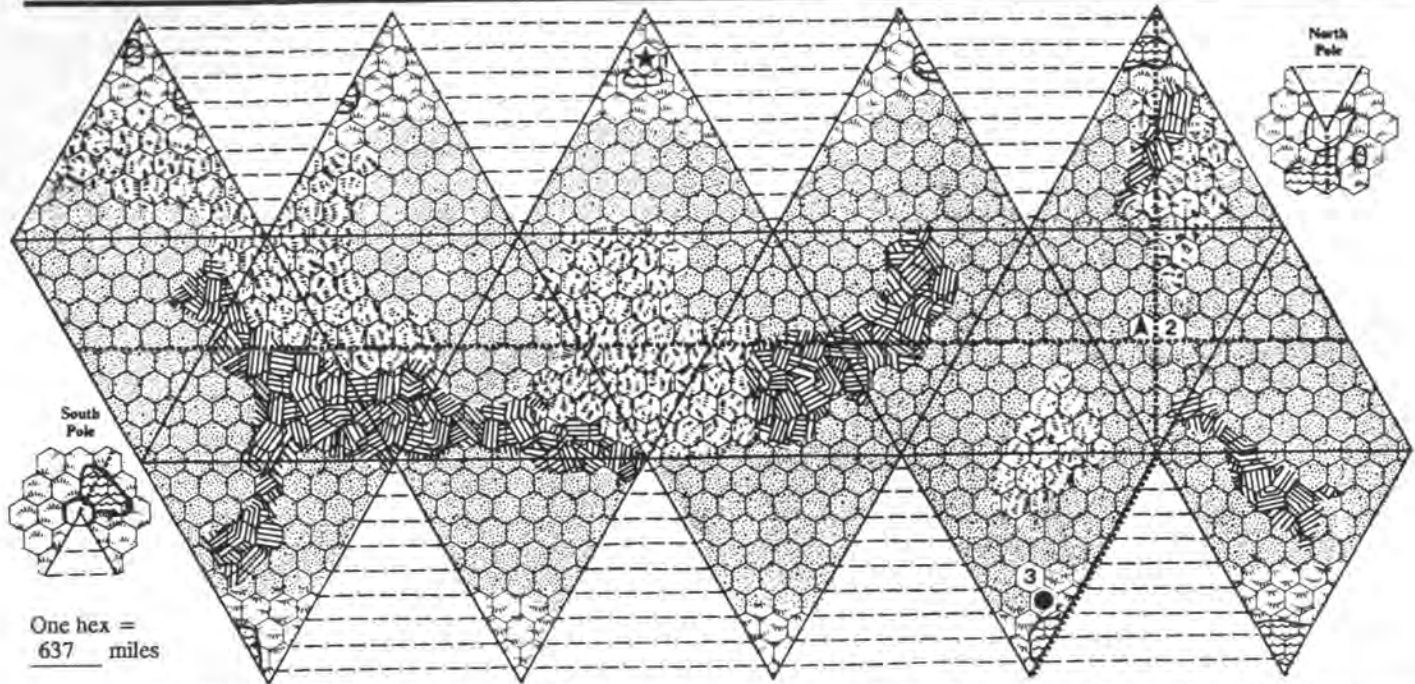
Bad Landing. A scientist, with his assistant, hires the PCs' ship to fly a "ball-of-string" survey orbit around Nightmare, to get detailed maps and energy readings. This is perfectly legal, as long as they don't land. But sabotage forces the PCs to land, or die in space. Minutes later, the "scientist" and "assistant" are out the airlock and gone, leaving a bomb behind. The PCs may or may not have a chance to solve the mystery. First they must defuse the bomb, then fix their ship and get off Nightmare. If they can. And if they make it offplanet, they'll immediately be arrested by the Patrol for an unauthorized landing . . .

PLANETARY RECORD: Nightmare — *local name Kharg* (Mecca II)



Planet type	Hostile terrestrial	Diameter	11,600 mi.	Gravity	1.6 G	Density	5.9	Composition	Medium-Iron
Axial Tilt	28°	Seasonal Variation	High	Length of Day	14 hours	Length of Year	142 days/	83 Earth days	
Atmosphere: Pressure	2.1 (Very dense)	Type and Composition	Corrosive — CO ₂ 68%, Oxygen 20%, Nitrides 11%, Chlorine 1%						
Climate	Extremely hot	Temperatures at 30° latitude:	Low	160°	Average	183°	High	206°	
Surface Water	24%	Humidity	72%	Primary Terrain	Desert and chlorine jungle				
Mineral Resources: Gems/Crystals	Unknown	Rare Minerals	Unknown	Radioactives	Unknown				
Heavy Metals	Unknown	Industrial Metals	Unknown	Light Metals	Unknown	Organics	Unknown		
Biosphere:	Dominant life form Chlorine-producing flora and fauna								
	Other significant life forms See text								
Other notes:	Functioning Precursor artifacts present; no landing team has ever returned; Nightmare has no moons								

PLANETARY RECORD: Al-Jebel (Mecca III)



Planet type Earthlike Diameter 9,100 mi. Gravity 1.04 G Density 5.0 Composition Medium-Iron
 Axial Tilt 4° Seasonal Variation None Length of Day 28.2 hours Length of Year 163 days/ 191 Earth days
 Atmosphere: Pressure .98 (Standard) Type and Composition Nitrogen 79%, Oxygen 19%, Argon 1%, Other 1%
 Climate Very hot Temperatures at 30° latitude: Low 95° Average 116° High 138°
 Surface Water 3% Humidity 22% Primary Terrain Desert and badlands; fertile plains near poles
 Mineral Resources: Gems/Crystals Scarce Rare Minerals Adequate Radioactives Scarce
 Heavy Metals Plentiful Industrial Metals Adequate Light Metals Adequate Organics Absent
 Moons None

Biosphere: Dominant life form Very small reptiles; imported Terran ecology at poles
 Other significant life forms Hardy native bushes

Civilization: Population(s) 16 million (?) (PR 7) Tech Level(s) 6 Control Rating 5

Society Neo-Moslem culture organized by patriarchal clans; Sheik of Al-Jebel is elected world ruler

Starports Class III at Patrol base

Installations Patrol base (4,000 permanent staff and Patrolmen); Patrol prison (20,000 inmates, 1,000 staff)

Economic/Production Communities at poles are self-sufficient, but do not export;

Patrol facilities import TL10 equipment and materials

Other notes: Map key: 1. Irem (capital) 2. Patrol base and Al-Jebel Prison 3. Tarlik

Polar residents live at TL6; Patrol base is fully equipped at TL10

System Information:

Star Name Mecca Type G8 VI Location Old Frontiers 13/12/-12

Biozone .5-.8 Inner Limit 0 Number of Planets 6

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Shaitan	1	.1	Hot rockball	8,200	5.1	.96	None	No landings recorded
Kharg (Nightmare)	2	.4	Hostile terrestrial	11,600	5.9	1.58	CO ₂ , Nitrites, Chlorine	See p. 12
Al-Jebel	3	.7	Earthlike	9,100	5.0	1.04	Oxygen-Nitrogen	Detailed above
Al-Izmir	4	1.3	Rockball	7,400	5.6	.95	Trace — CO ₂	—
Al-Nasr	5	2.5	Gas giant	43,000	2.1	2.07	Methane-Ammonia	90° axial tilt
Al-Azrad	6	4.9	Gas giant	48,000	1.7	1.87	Hydrogen-Methane	—

Badlands (Blazon Ib) — *Prohibited*

The hellhole known as Badlands is a gigantic moon circling in a distant orbit around the only planet in the Blazon system, a massive gas giant named Gojira. Badlands is about as hostile as a world can get and still be (nominally) habitable. The heat from its blue giant primary, plus that from the turbulent gas giant it circles, makes Badlands hellishly hot — barely within tolerable limits for humans. Coupled with its thick, corrosive atmosphere and boiling nitric acid seas, Badlands is hardly the type of world anyone would wish to claim, much less settle.

But Badlands is adequate for what it has become: a free sanctuary world — a no man's land among the stars. Passed up by the early waves of colonists and cast aside by Survey as worthless, Badlands was secretly explored by representatives of the Organization. The planet's very worthlessness made it ideal for what the Organization had in mind. Surreptitiously, the criminal combine established a base there, expanding it and fortifying it against the corrosive acid rains that washed the planet. It was easy enough to do this in secret . . . nobody had any interest in the Blazon system at all! Then they let it be known through their underground channels that here, on Badlands, was a sanctuary for all those who were "too hot" to remain in civilized space. For a price, they could find a hidey-hole on Badlands.

By the time the Patrol learned of the existence of the Badlands sanctuary, it was too firmly established to be easily rooted out. In addition to its fugitive population, Badlands had become a home base for several of the pirate fleets operating along the frontiers. Badlands enjoys a thriving black market trade as well, and many banned or highly-taxed goods change hands here. The Organization has set up a private, independent defense fleet for Badlands as well — to keep out "undesirables" such as the Patrol and other lawmen, and to keep any of the pirate fleets from getting too greedy. The cost to raid the system became too high for the Patrol to easily pay.

Though it is a hellworld by human terms, Badlands has abundant life everywhere except the equatorial regions. A bonus for the Organization was the discovery of the Killean plant, a creeping, insidious weed named after its discoverer — and first victim. The plant is deadly poison, but can be refined into the addictive "Kill-Krazy" drug — see below.

Now, criminals, terrorists, political refugees and other undesirables from across the entire frontier can find safe refuge from the law on Badlands. This makes the domes and underground cities of Badlands, clustered around its single starport, as dangerous as the environment outside. Even the most hardened bounty hunters generally refuse to pursue their prey to the surface — and few who do ever return. Even the Summer-sun mercenaries have twice refused lucrative contracts to raid domes on Badlands.

What little "law and order" exists on Badlands comes from the misnamed Peace Committee, an

oligarchy consisting mainly of the most ruthless, powerful fugitives on the world. Generally, anything goes on Badlands, but the Peace Committee sees to it that major disputes are settled quickly and efficiently so that they and their personal followers aren't disturbed. The Peace Committee's enforcement squads are recruited from deserters and cashiered military officers . . . but proven skill is required; no dockyard scum need apply! Crossing the Peace Committee on Badlands is the easiest way to commit suicide on the planet — short of walking outside without an armored vacc suit.

Kill-Krazy drug

This is a refined form of the toxin from the Killean plant. Taken internally, it is a hallucinogen in small amounts and a deadly poison in larger amounts. Roll vs. HT to avoid addiction after a single dose. If the first dose doesn't addict, each later dose (no matter how long between doses) gives a cumulative -2 penalty to the roll to avoid addiction.

A K-K user sees intense hallucinations which last (20-HT) hours, with a minimum of 6 hours. A user has the Berserk disadvantage, at a -3 to any roll to avoid berserking, during the time the hallucinations persist. Oddly, these hallucinations are in black-and-white; a K-K user is color blind for (40-HT) hours after each dose.

One dose of K-K (a very small amount) costs \$100 most places (but only \$30 on Badlands) and is enough to cause hallucinations. If more doses are taken, the user automatically takes 2 dice of damage per extra dose, or 1 die per extra dose if a HT roll is made. If the victim survives, the drug effects persist for the cumulative time appropriate for all doses taken. All doses taken within 24 hours of the last dose count as if taken at once!

An addiction to K-K is a -30 point disadvantage; the drug is "totally addictive," giving a -10 on all withdrawal rolls.

Adventures on Badlands

Manhunters. The PCs, whether for bounty, for private revenge, or for some other reason, must pursue a criminal to Badlands. Of course, once on Badlands, the criminal is by definition a desirable citizen, and anybody looking for him is breaking the law. Acting and Streetwise skills will be absolutely necessary. For those with the right background, signing up with the Peace Committee enforcers might be an interesting "in."

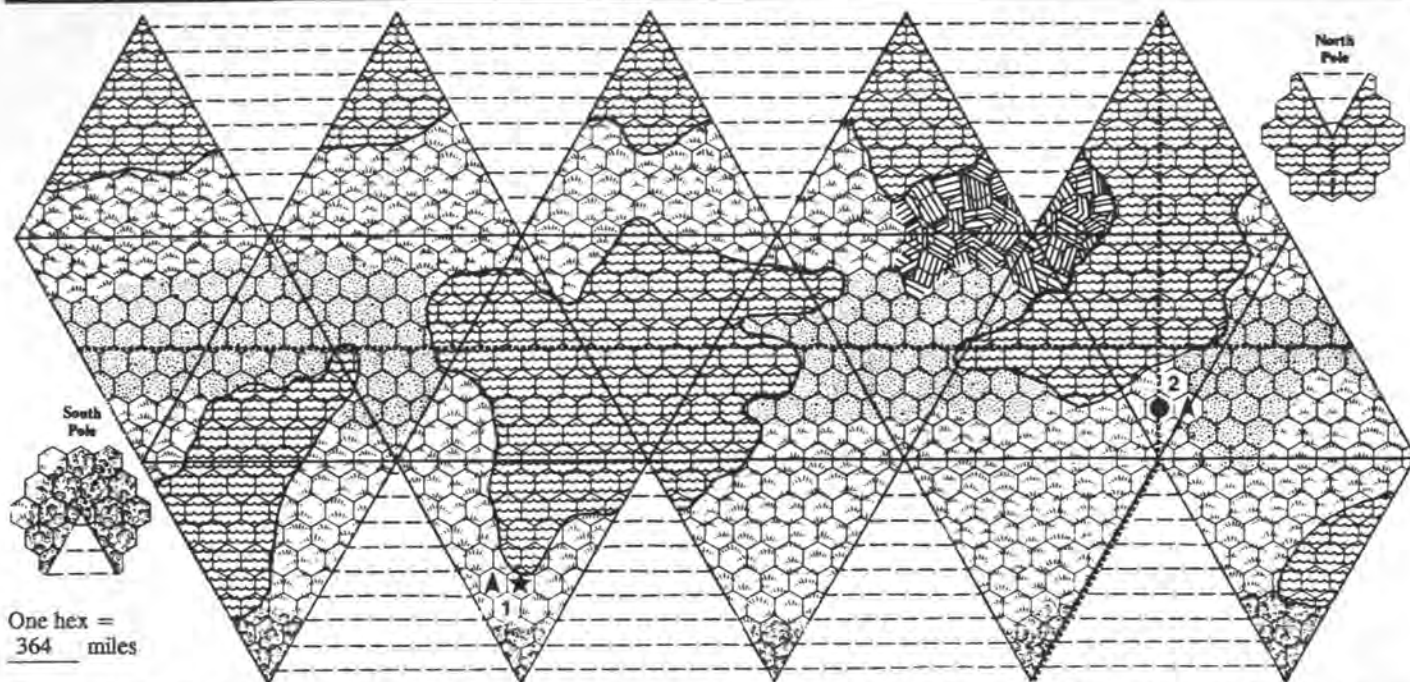
Garden of Death. The PCs, as members or associates of a law-enforcement agency (or possibly on behalf of the Escott Institute) are commissioned to visit Badlands and bring back a living specimen of the Killean plant. To do this, they must come up with a believable excuse for visiting the planet; get onto the surface; find a healthy plant specimen; and get it aboard their ship. It must stay in a Badlands environmental section which duplicates the loathsome conditions of the hell-moon's surface. This will be installed on their ship at no cost, but it takes 12 cy, 4 tons, and 2 MW of power to operate . . . and anyone who sees it will ask lots of questions.

If the Organization gets even a hint that living plants are being exported, they'll be very upset. They would naturally suspect that someone intended to cultivate Killean elsewhere (interesting idea, that!). But the truth is even worse, from their point of view. The PCs' employers want to study the plant in order to develop a biocide or virus to wipe out the species entirely, eliminating a vicious drug from the universe.

Possible complication: the Badlands environmental section springs a leak!



PLANETARY RECORD: Badlands (Blazon Ib)



Planet type Hostile Terrestrial Diameter 5,200 mi. Gravity .68 G Density 5.7 Composition Medium-Iron
 Axial Tilt 30° Seasonal Variation Great Length of Day 31 hours Length of Year long 49,000 Earth yrs.
 Atmosphere: Pressure 1.4 (Dense) Type and Composition Corrosive — Nitrides 60%, Oxygen 19%, others 21%
 Climate Very Hot Temperatures at 30° latitude: Low 107° Average 125° High 152°
 Surface Water 38% Humidity 67% Primary Terrain Plains of toxic vegetation
 Mineral Resources: Gems/Crystals Unknown Rare Minerals Unknown Radioactives Unknown
 Heavy Metals Ample Industrial Metals Unknown Light Metals Unknown Organics Unknown
 Moons Badlands is a moon of Gojira (Blazon I); length of month: 2.5 local days

Biosphere: Dominant life form Toxic, tree-like ferns

Other significant life forms Various forms of simple plant life, including multi-cellular algae and ferns of all sizes

Civilization: Population(s) 500,000 (?) Tech Level(s) 10 Control Rating 2

Society Criminal oligarchy, ruled by Organization "Peace Committee"

Starports Class IV at Sanctuary; Class II (?) private port belonging to Organization

Installations Various criminal organizations, including several pirate bases, black markets, and smugglers' exchanges

Economic/Production Commerce, largely illicit; a heavy importer, with few on-world production facilities; exports Kill-Krazy drug.

Other notes: Map key: 1. Sanctuary 2. private dome (Organization property)

"Plains" and "forest" are toxic vegetation; mineral resources are largely unknown; rains and oceans are nitric acid

System Information:

Star Name Blazon Type B3 II Location Old Frontiers -3/13/10
 Biozone 250-375 Inner Limit 5.0 Number of Planets 1

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Gojira	12	409.8	Gas giant	62,000	1.8	2.55	Hydrogen-Methane	3 giant, 11 smaller moons
Bostick	12	409.8	Rockball	4,000	3.9	.36	None	Moon of Gojira
Badlands	12	409.8	Hostile terrestrial	5,200	5.7	.68	Dense Corrosive	Moon of Gojira
Barr	12	409.8	Rockball	6,100	2.8	.39	Trace reducing	Moon of Gojira

Bannar (Kastle's Star I)

The planet Bannar was settled by a mixed lot of colonists, all fleeing religious persecution. They established a colony in which all would be free to follow their own beliefs . . . or so they hoped. But among the original colonists was a group led by a charismatic teacher named Roq Bannar. With his magnetic personality, Bannar soon converted nearly everyone there to his beliefs, which he called, modestly, Bannarism. Bannar was soon accepted as planetary leader, and "allowed" the planet and its primary to be renamed after him. Shortly thereafter, Bannarism was named the official planetary religion by a unanimous popular vote.

Once in control, Bannar opened the world up to other religious refugees — provided they converted to Bannarism. Since the Bannarite creed emphasized the acquisition of material wealth, Bannarism proved quite easy to accept, and the population and economy grew steadily. By the time of his death, Bannar found himself the leader of a world well on its way to technological dominance among its neighbors.

Bannar's followers soon elevated their Prophet to the status of a god, and his 21-volume *Principles*, the compilation of which occupied much of the prophet's later years, became Holy Writ. The Bannarite priests dutifully carried out Bannar's last wishes — to carry his faith to other worlds. Again, the Bannarite tenets of material wealth gained many followers, and the theocratic world gained much influence.

The only threat to the rule of the Bannarite priests since the religion's founding occurred a few years after Bannar's "ascension to the celestial throne." Another religious "refugee" came to Bannar: a mysterious bearded man with flowing robes and an oddly carved staff — a mystic figure in total contrast with the materialism of the Bannarite priests. He gave his name as Jayar Drayhoah.

While claiming to embrace Bannarism, it soon became apparent that the newcomer was instead teaching — and converting Bannarites in unprecedented numbers to — a different, mystical

faith based on an invisible, intangible god he called "Drayhoah," after whom he claimed to have taken his own name in homage. By order of the Bannarite priesthood, Jayar was imprisoned and sentenced to death. The new prophet somehow managed to escape, however, and with his followers (who claimed the escape was by divine intervention), left the planet. The Bannarites thought that was the end of their problem. They were wrong.

Drayhoah had found another world, where he met more success (see *Drayhoah*, p. 28). Soon his own religion was also seeking converts among the stars. In recent years, the Bannarites have found themselves in a struggle for converts with the Drayhoans, who are now their major religious rivals. This conflict for men's minds — or souls — has engendered a bitter rivalry between the two religious disciplines, which has recently degenerated to a state of semi-jihad, as each struggles for supremacy. Because of this hostility between Bannarites and Drayhoans, and the zeal with which both seek converts, both worlds can be dangerous for visitors. And on neither planet is it safe to admit having visited the other.

In the meantime, the Bannarites continue their planning and working, doing their best to grow rich to please their god. They have had many real achievements, including the orbiting of a huge solar mirror which — over seventy years — melted the northern icecap and added greatly to the fertile area of the planet.

Adventure on Bannar

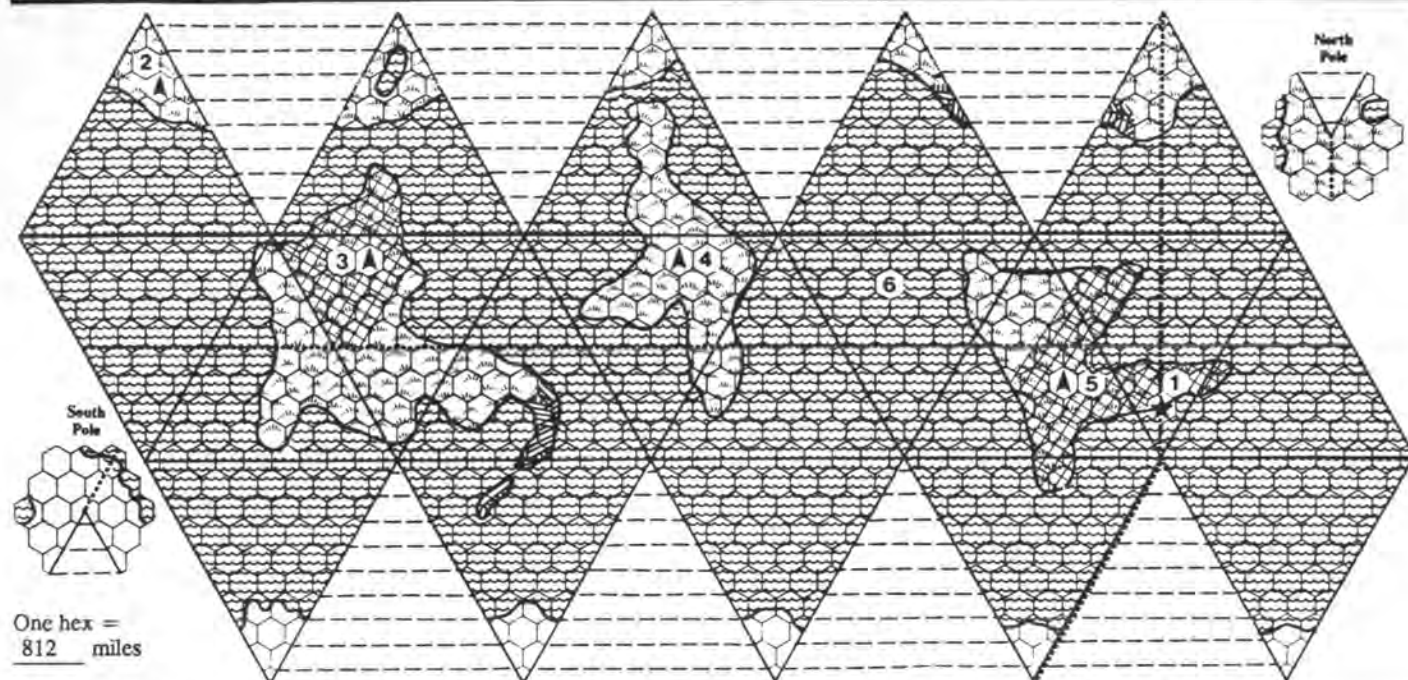
Temple of Wings. There are hundreds of Bannarite temples on Bannar — in the middle of cities, and in incredibly out-of-the-way places. The Bannarites seem to glory in locating temples in odd and difficult spots, just to prove that they can overcome difficulties in the name of their god. But the oddest of all was the Temple of Wings, built in the middle of the Carnyorre Ocean. It could only be reached by air-car or boat. Nevertheless, it was famed for its architecture, and was a popular and famous devotional site.

"Was," not "is." Because the Temple of Wings is deserted, and — before the Bannarite media quit covering the story and "forgot" all about the temple — those who had reason to know claimed that the temple was haunted, or, worse yet, cursed. And not by any apparition with clanking chains, either. Several priests, and more than a dozen visitors, vanished from the temple, to reappear in small pieces. Services were repeatedly interrupted when the entire congregation fled in terror — from nothing! In the end, the Bannarites gave up and left. PCs on the planet, hearing the story, might investigate out of curiosity, or out of a desire to loot the expensively-decorated temple.

The reason for the haunting is up to the GM. Possibilities include an Organization plot to loot the temple, with highly-trained ninja killers and sonic weapons set on subsonic "scare" frequencies; a Drayhoan attempt to discredit the Bannarites; an internal schism among the Bannarites themselves; or possibly something genuinely occult! This last is a good "curve" to throw at your devoutly materialistic PCs who think a blaster can solve every problem. For this one, maybe they need holy water . . .



PLANETARY RECORD: Bannar (Kastle's Star I)



Planet type Earthlike Diameter 11,600 mi. Gravity 1.04 G Density 3.9 Composition Low-Iron
 Axial Tilt 12° Seasonal Variation Minor Length of Day 18.5 hours Length of Year 248 days/ 191 Earth days
 Atmosphere: Pressure 1.08 (Normal) Type and Composition Nitrogen 75%, Oxygen 23%, others 2%
 Climate Cool and rainy Temperatures at 30° latitude: Low 40° Average 59° High 78°
 Surface Water 81% Humidity 76% Primary Terrain Plains and hills
 Mineral Resources: Gems/Crystals Absent Rare Minerals Absent Radioactives Absent
 Heavy Metals Absent Industrial Metals Absent Light Metals Scarce Organics Plentiful
 Moons 2 moonlets (Tick and Tock), 2 small moons (Yanov and Harin), 1 medium moon (Swann)

Biosphere: Dominant life form Small, primitive mammals, no larger than a big Terran dog
 Other significant life forms General earthlike ecology

Civilization: Population(s) 8.7 billion (PR 9) Tech Level(s) 10 Control Rating 5

Society Theocracy

Starports Class V at Farniston; Class III at Dubai; Class II at Hupsworth and Holy Grace

Installations Several corporate headquarters and religious sites, including the "haunted" Temple of Wings

Economic/Production Produces agricultural products and some advanced technology; must import most minerals; significant iron mining occurs in neighboring asteroid belt

Other notes: Map key 1. Temple Prime (capital) 2. Hupsworth 3. Farniston Continental Starport
 4. Holy Grace 5. Dubai Memorial Starport 6. Temple of Wings

System Information:

Star Name Kastle's Star Type G7 VI Location Old Frontiers -13/-9/-8

Biozone 0.5-0.8 Inner Limit 0 Number of Planets 3

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
—	1	.4	(Empty orbit)	—	—	—	—	—
Bannar	2	.7	Earthlike	11,600	3.9	1.04	Oxygen-Nitrogen	Detailed above
—	3	1.0	Asteroid belt	—	—	—	—	Rich in iron
Starion	4	1.6	Gas giant	97,000	2.5	5.55	Hydrogen-Methane	Large moon w/ inclined orbit
—	5	2.8	Asteroid belt	—	—	—	—	—
—	6	5.2	(Empty orbit)	—	—	—	—	—
—	7	10.0	(Empty orbit)	—	—	—	—	—
—	8	19.6	(Empty orbit)	—	—	—	—	—
—	9	38.8	(Empty orbit)	—	—	—	—	—
—	10	77.2	(Empty orbit)	—	—	—	—	—
Bavaria	11	154.0	Iceball	1,700	7.9	.31	None	Inclined, retrograde orbit

Bollux (Canaris II)

Bollux was colonized, not because it is an especially desirable planet, but because its location between other worlds made it an obvious (if not necessary) stopping point. It is now the primary center for business and commerce in the Old Frontiers and surrounding areas. As such, the planet houses the main corporate or regional offices for many of the major shipping lines and other concerns, including such firms as Lomax Lines, DeMeriville Industries, Ltd., and Tri-Tachyon. Bollux is the chief port for exports and imports to and from independent worlds toward Galactic North.

Bollux is an old planet, with thin air and little water; its remaining seas are small and very salty. Except near the seas, much of the world is desert. Unfortunately, the seas are located near the equator, where the planet is hottest. Most of the population lives in or near the capital, Justin, near the starport and the corporate offices. Elsewhere, Bollux is mostly uninhabited.

Because the planet was colonized to serve as a shipping and corporate center, the government of Bollux is run by a Board of Directors chosen by corporate concerns headquartered there. Industrial espionage is a constant threat on Bollux, and corporate security is tight. Planetary police and security is maintained by a separate corporation, Bollux Security Inc., owned and controlled by the major corporations there.

The bazaars of Justin are the most varied in the sector. Here may be found goods of all types, in surroundings ranging from open-air flea markets to ultra-tech shopping malls and office towers. This is also an excellent place to find bargains in goods of all kinds which were damaged, abandoned, or confiscated for nonpayment of shipping charges.

Many find Justin's Star Town, surrounding the starport, an excellent place for R&R; there is almost no law enforcement, and money talks loudly. Rolls to contact the Organization, or to hire free-lance "specialists," are at +2 here.

A Mydar Mining Corporation operation is now "mining" the unusual formations recently discovered on the floor of the shallow sea near Justin — huge globular deposits left by millions of years of mineral concentration as the seas evaporated. Most of the work is done by remote-controlled robot collectors supervised by a team led by Jawn Mydar, son of the corporation's chief executive officer and largest stockholder.

Mydar Mining (GM's Information)

The Mydar Mining Corporation is a front for the Organization, and the elder Mydar is an Organization VIP. The mining operation may conceal even more nefarious activities — a smuggling drop, an illegal drug lab, a relay point for stolen or illicit goods or any other outlawed activity the GM chooses. Or it might be a legitimate operation, in spite of its criminal ties. Even if the operation is perfectly legitimate, though, unauthorized visits to the mining platform will be discouraged by Mydar's own security personnel; who knows what competitors might do?

Adventures on Bollux

Industrial Espionage. If the PCs have come into possession of any little bit of information or technology, Bollux is a logical place to sell it . . . carefully. This is also the best place in the sector for an ultra-tech ninja or thief to find work.

Hart's Hope. Bollux has two liveable areas, on opposite sides of the planet. One, of course, is that to the south of Justin. The other has been ignored — until now. It's not a dream-world, but it's better than many planets . . . and Bollux is a great location. Damien Hart, a minor stockholder in Tri-Tachyon, has emerged from the Bollux political game with clear ownership of most of the area, and he's hiring help. If everything goes well, Hart's Hope could take a lot of business away from Justin in a decade or so.

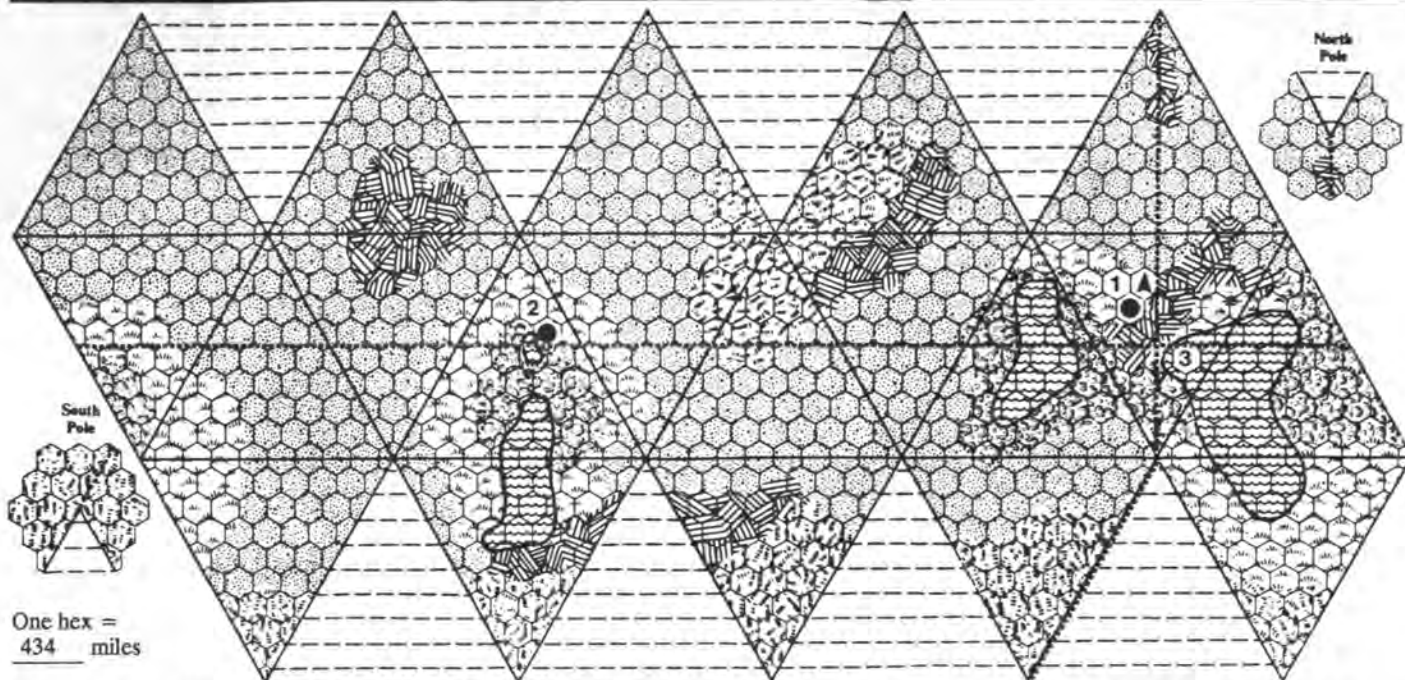
This will be an interesting way to build a colony. That whole hemisphere of Bollux is virgin and unexplored. But anything the colony really needs can be easily brought in through Justin starport — at least, until the Justin Board of Directors realizes what's going on!

Rock Climbing. The city of Justin is built just east of the Green Mountains . . . and one thing green about that range is the fist-sized emeralds that are found there. The Board of

Directors has licensed an Emerald Combine to exploit the resource. But half the people of Bollux have taken up nighttime rock-climbing (just as a hobby, of course). The biggest danger on the cliffs isn't falling, or even being picked up by Security with a pocket full of green fire. It's the other emerald hunters.



PLANETARY RECORD: Bollux (Canaris II)



Planet type Earthlike Diameter 6,200 mi. Gravity .81 G Density 5.7 Composition Medium-Iron
 Axial Tilt 6° Seasonal Variation Minor Length of Day 41 hours Length of Year 377 days/ 644 Earth days
 Atmosphere: Pressure .75 (Thin) Type and Composition Nitrogen 67%, Oxygen 29%, Argon 1%, others 3%
 Climate Tropical Temperatures at 30° latitude: Low 79° Average 103° High 132°
 Surface Water 6% Humidity 22% Primary Terrain Desert
 Mineral Resources: Gems/Crystals Ext. Plentiful (emeralds) Rare Minerals Ample Radioactives Scarce
 Heavy Metals Scarce Industrial Metals Scarce Light Metals Scarce Organics Scarce
 Moons None

Biosphere: Dominant life form Birdlike creatures, nesting in huge underground colonies
 Other significant life forms Some plants — especially succulents — and small reptiles

Civilization: Population(s) 630 million (PR 8) Tech Level(s) 10 Control Rating 4/1*

Society Corporate government in capital (Justin); little control in outlying areas

Starports Class V at Justin

Installations Several corporate headquarters; Patrol, Survey, naval headquarters

Economic/Production Trade hub for surrounding sector; Produces emeralds, some silica products for export; must import most goods, especially metals and plastics

Other notes: Map key: 1. Justin 2. Hart's Hope 3. Mydar Mining mineral-recovery platform

* Control rating 4 within Justin, 1 outside Justin

System Information:

Star Name Canaris Type G2 IV Location Old Frontiers 3/5/2

Biozone 1.0-1.5 Inner Limit 0 Number of Planets 9

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
—	1	.6	(Empty orbit)	—	—	—	—	—
Fastball	2	.9	Hostile greenhouse	10,500	7.5	1.80	Superdense methane	—
Bollux	3	1.2	Earthlike	6,200	5.7	.81	Thin Oxygen-Nitrogen	Detailed above
Bourdoni	4	1.8	Hostile terrestrial	9,350	2.6	.56	Very Thin Oxy-Nitro	PR 3 mining colony
Perry	5	3.0	Gas giant	19,000	1.3	.57	Hydrogen-Methane	—
—	6	5.4	(Empty orbit)	—	—	—	—	—
—	7	10.2	(Empty orbit)	—	—	—	—	—
—	8	19.8	Asteroid belt	—	—	—	—	—
Creedmoore	9	39.0	Gas giant	27,000	2.0	1.24	Hydrogen	Spectacular ring
—	10	77.4	Asteroid belt	—	—	—	—	—
Whatcheer	11	154.2	Gas giant	22,500	2.3	1.18	Hydrogen-Methane	Asteroid belt
Breech	12	307.8	Gas giant	37,000	1.5	1.27	Hydrogen	Faint ring
Garand	13	615.0	Icy rockball	6,950	4.1	.65	None	—
—	14	1,229.4	(Empty orbit)	—	—	—	—	—
Bisley	15	2,458.2	Icy rockball	11,600	2.1	.56	None	Probably captured

Byte (Omega V)

Byte is a desert world with only one industry: computing. The world is owned by the BYTE Corporation, a major computing and information company, and almost all permanent inhabitants are employees. The planet Byte is one of the major information centers in the known universe.

All facilities on the planet are underground, because of the hostile nature of the world's surface. Indeed, that is one reason Byte was selected; it's much easier to keep total control of a planet where no one can live without artificial aid.

The only real city on the planet is Byte Central. It is a manufacturing facility for BYTE's computer systems — not the cases and peripherals, which can be built anywhere, but the secret ultra-tech "brains" of the system. BYTE employees are well-paid, but most contracts run for a minimum of three years, during which the employee cannot leave the planet. Many jobs require a mindwipe afterwards to protect corporate secrets!

Byteport is located a hundred miles away from Byte Central, for safety and security reasons. It is a large facility, underground like everything else on the planet. Byte Central is only 30 minutes away by tubetrain. Like everything else on the planet, the ride costs money: \$10 per person one-way, \$40/ton for freight. Indeed, not even air is free on Byte, since it has to be imported. There is a \$100 per week "air tax," payable in advance, and those who can't pay are escorted to the surface. Very few people are actually forced out the airlock . . . most of them agree to take whatever hazardous job BYTE needs doing that day. Often it's still a death sentence.

Byte Central has entertainment facilities for visitors and employees. They are excellent (anything can be had, for a price) but expensive.

The other business of BYTE, and the planet Byte, is information. Most of Byte's huge data banks are available to any visitor . . . for a price. All data-processing and connect time fees on this world are 20 times those listed in *GURPS Space* (p. 38). But research conducted with these databanks is at a +5 to all rolls. The boast of Byte is that "if it's known, we know it." All hotel rooms, restaurants and even freshers have computer terminals from which data may be accessed. Certain questions of a

sensitive nature, however, require proper security clearances. Anyone asking questions about Byte itself may, in turn, be asked questions by Corporate Security. And there are other subjects BYTE has been well-paid to keep secret. Its so-called "Swiss accounts" are databases that even BYTE itself cannot (so it says) access. The central computer constantly searches incoming information for correlations to this secret material and adds it to the Swiss database, and then — theoretically — forgets that it did so. Thus, the owner of a Swiss database can monitor the galactic stream of data for information bearing on his most secret projects, without revealing anything.

Ordinary research on Byte requires no computer skill — just the ability to ask intelligent questions. The databanks are coordinated by an artificial intelligence, called "The Librarian," which appears to have an effective IQ of 14 or so, and a helpful, friendly personality. The question of whether the Librarian is itself sentient is one BYTE won't answer.

But sentient computers are strictly forbidden on Byte, as a "security measure." Any found on the planet are confiscated. This has led to more than one diplomatic incident, when a sentient computer that was a citizen of another planet disappeared on Byte — but Corporate Security has always held firm, and no trespassing AI has ever been seen again.

It would take extremely high skills in both Computer Programming and Electronics (Computer) skills to have even a chance of breaking into a Byte computer or avoiding payment — all rolls would be at -10! This is, no doubt, one reason why AIs are forbidden on Byte.

Because of the sensitive nature of much of the data stored in the Byte computers, the planet is ringed by a system of special defensive satellites designed to repel unauthorized intruders. Military and/or Patrol vessels are usually in orbit, and a contingent of Summersun mercs (see p. 54) guards the ground accesses to Byte Central and other facilities. Byte's own Corporate Security acts as the planetary police.

Visitors who have information to sell can often make quite a tidy sum on Byte, provided they don't stay long enough to spend it in the computers or on other high-priced amenities. Byte has a reputation for paying very fair prices for information received, and for keeping confidentiality about questions asked by its clients. Trade-offs of information for computer time can easily be arranged.

Adventures on Byte

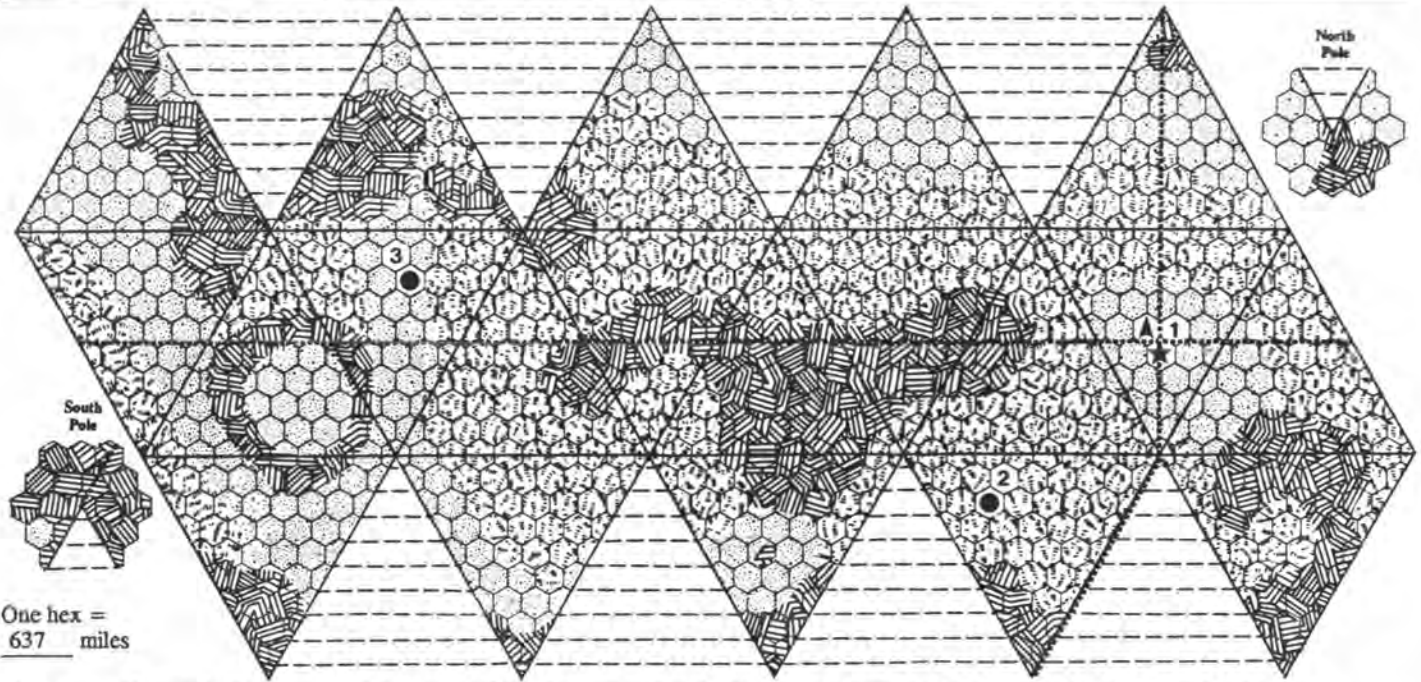
Contract Breaker. While on Byte, the PCs can be contacted for help by a BYTE employee who wants to escape the planet before his contract is up, in order to avoid brainwipe.

The Cybernetic Hostage. The PCs could be sent to Byte in order to rescue a sentient computer who made the mistake of visiting the surface and was captured by Corporate Security. The AI could have been an innocent researcher . . . or it might be an intelligence agent . . . and the PCs don't have to know for sure which. Possible complications: the AI was destroyed within minutes of capture; the AI was reprogrammed and is now working for Corporate Security; the whole mission is a test of Security's security, with the PCs as expendable pawns.

Broke On Byte. Due to some awful mischance, the PCs are down to their last credit . . . and their air taxes are only paid up for another week. Better find some money very fast, or be prepared to sign up for whatever odd jobs the BYTE recruiting office has available that day. This could lead to any number of situations.



PLANETARY RECORD: Byte (Omega V)



Planet type Hot rockball Diameter 9,100 mi. Gravity .98 G Density 4.7 Composition Medium-Iron
 Axial Tilt 13° Seasonal Variation Minor Length of Day 42 hours Length of Year 27,000 days/ 128 Earth years
 Atmosphere: Pressure .7 (Very Thin) Type and Composition Ammonia 70%, CO₂ 22%, others 8%
 Climate Very hot Temperatures at 30° latitude: Low 105° Average 128° High 157°
 Surface Water 0% Humidity 0% Primary Terrain Desert
 Mineral Resources: Gems/Crystals Ample Rare Minerals Absent Radioactives Absent
 Heavy Metals Ample Industrial Metals Plentiful Light Metals Ample Organics Absent
 Moons 1 medium moon (Chrysalis), 2 moonlets (Zero and One)

Biosphere: Dominant life form None
 Other significant life forms None

Civilization: Population(s) 9.57 million (PR 6) Tech Level(s) 10 Control Rating 6
 Society Corporate state
 Starports Class V at Byte Central
 Installations Corporate headquarters of BYTE Corporation
 Economic/Production Industrial — produces the most advanced computers known; also sells information

Other notes: Map key: 1. Byte Central 2. Ellinger 3. Beeman
 AI units are strictly forbidden on Byte

System Information:

Star Name Omega Type G8 Ib Location Old Frontiers 1/1/0
 Biozone 50-75 Inner Limit 1.0 Number of Planets 10

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
—	1	.6	(No planet possible)	—	—	—	—	Inside inner limit
Banduch	2	1.3	Hot rockball	11,700	7.2	1.93	Dense polluted	No recorded landings
Stokes	3	2.0	Hostile greenhouse	7,700	7.0	1.23	Reducing	No recorded landings
Sheeley	4	3.4	Hostile greenhouse	4,700	5.1	.55	Reducing	No recorded landings
Von Thorn	5	6.2	Hostile greenhouse	4,200	6.5	.63	Dense flourine	No recorded landings
Byte	6	11.8	Hot rockball	9,100	4.7	.98	Thin exotic	Detailed above
Milliken	7	23.0	Hostile greenhouse	9,100	7.6	1.58	Nitrogen	No recorded landings
—	8	45.4	(Empty orbit)	—	—	—	—	—
Slocum	9	90.2	Gas giant	115,000	.8	2.11	Hydrogen-Methane	Faint ring
Porter	10	179.8	Rockball	11,800	4.7	1.27	Dense reducing	1 captured moon
—	11	359.0	Asteroid belt	—	—	—	—	—
Jones	12	717.4	Gas giant	97,000	1.7	3.78	Hydrogen-Methane	37 moons
Ford	13	1434.2	Gas giant	70,000	2.1	3.37	Hydrogen	—

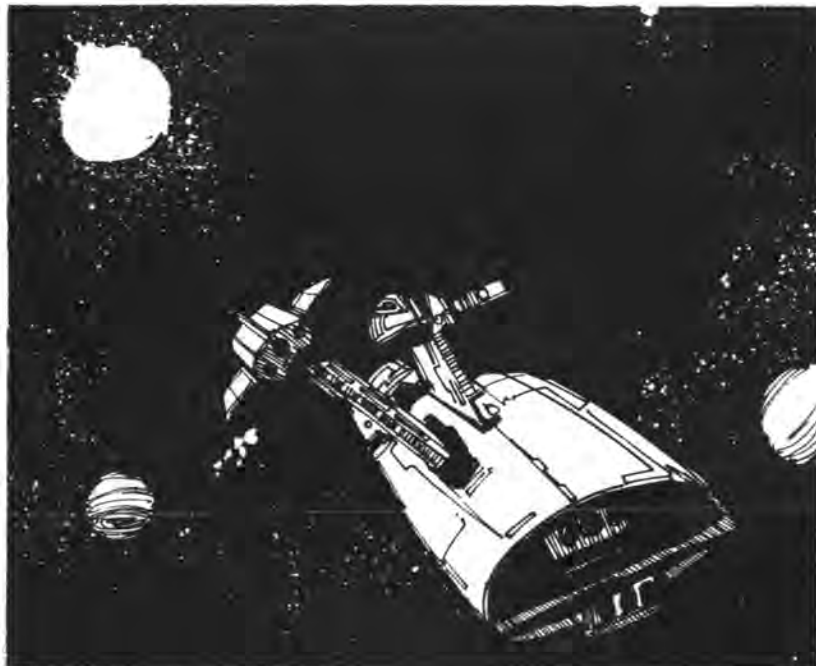
Carcosa (Styx I) — *Prohibited*

Carcosa is a cold, dead world circling at the rim of what was once a solar system. Eons ago, the star went supernova, annihilating all its planets except Carcosa. Though it is now a barren rockball, there is evidence that Carcosa once was a terrestrial planet with an atmosphere and seas, all of which boiled away when the star exploded. Certainly there was life of some sort on Carcosa, as evidenced by the empty, cyclopean cities that still stand on its fused plains.

These structures, mute testimony to a Carcosan civilization millions of years ago, are constructed of gigantic blocks of stone, leading some xenoarcheologists to suggest that their builders had reached no higher than TL2 at the time they were destroyed. Others argue for a higher level; how, they contend, could a primitive culture have built the thousand-foot spires that crown many of the dead cities?

And some point to Carcosa's huge elliptical orbit, 30 degrees off the star's plane of rotation, as evidence that the world doesn't belong to this system at all. Perhaps Carcosa had been dead and wandering through space for millions or billions of years before it was captured by the star which later seared it.

Studies of Carcosa have been discouraged by the other dangers of the system (see below). Most of the sector's researchers believe that whatever the truth about Carcosa might be, it was lost in the flare of the supernova and the dust of the eons that followed . . . and that there are better and safer things to study, closer to home.



Old Irregular

Carcosa's sun, Styx (or Pulsar PSX113A, as it is listed on Survey charts) is unique in that it is the only *irregular* pulsar ever discovered. It is this characteristic that gives it its popular name, Old Irregular. It is not yet understood why or how this dim ember of a neutron star emits pulses at irregular intervals, when all other known pulsars are regular as clocks. The hazardous conditions within the nebula have thus far made scientific studies in the area unfeasible.

The Deerstalker Nebula that fills the space around Old Irregular was named because its appearance from certain angles

roughly resembles the old Terran flapped cloth cap of that name that was worn by hunters in the 19th and 20th centuries. The nebula itself is a "dark" one, invisible at distances greater than a dozen parsecs except by sophisticated instruments. Within that range, it appears as a black shape against the void. The nebula itself is some 2,000 AU in diameter, extending an average of 400 AU past Carcosa's orbit.

The nebula, and thus the entire system, has been declared a Prohibited zone. The ionized dust and gases within the nebula interfere with sensor readings, making navigation nearly impossible. Even Survey vessels equipped with the most sophisticated sensors have disappeared in the nebula. Some may have ventured too close to the neutron star at the center of the system. Others may have attempted FTL travel within the nebula; experience has proved this to be a mistake that can have fatal consequences.

Carcosa, and, indeed, the entire Deerstalker nebula area, is a favorite rendezvous for smugglers and pirates, who can transfer goods and prisoners without interference in the areas along the fringes of the nebula. The presence of such space-scum makes the area even more dangerous.

Effects of the Nebula

Should starships enter the Deerstalker nebula for any reason, they'll find their sensors losing effectiveness as they travel farther into the dust and gas cloud. For each 100 AUs into the nebula they go, the effective range of their instruments will be halved, until they are effective only within a few miles — which in astrogation is effectively traveling blind. All Sensor and Astrogation skills will be decreased by 1 point per 100 AUs into the nebula as well, and an Astrogation roll is needed to escape the system.

If the starship comes within 100 AUs of the pulsar, it suffers the effect of an attack with Firepower 50 every half-hour. Double the strength of this attack for every 10 AUs closer that the ship approaches the star.

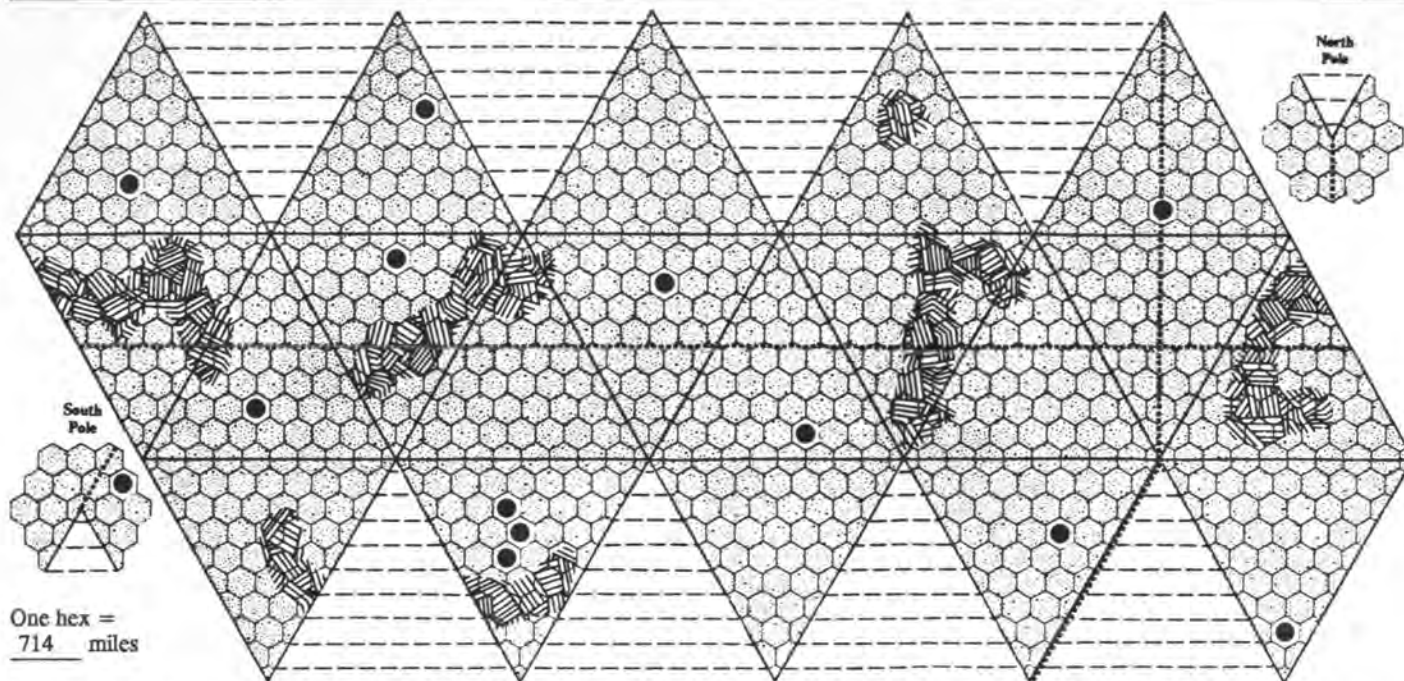
If FTL drives of any kind are activated within the Deerstalker nebula, the GM should roll on his Misjump table to see what happens to the vessel. STL travel through the nebula at more than minimal maneuvering speeds is also risky; an hourly Piloting roll is required, and failure means the equivalent of an attack with a Firepower of 100.

Adventures on Carcosa

Don't Ask. Though curious PCs who reach Carcosa might search for life or usable artifacts, they are unlikely to find much . . . this world gives a whole new depth to the term "dead." Unless, of course, the GM wants to introduce some horror elements . . . in which case, the cities might have been built by creatures to whom neither time nor space was especially important. Humans aren't too important, either . . . but they might be tasty. Perhaps the scout who named the planet after one of Lovecraft's visions knew more than he realized.

In The Nebula. Ships venturing into the Deerstalker could encounter a variety of pirate and smuggler craft. Many will run from anything bigger, and will be tempted to attack anything smaller. Some will be familiar enough with the area to have recalibrated their sensors, giving them a great Astrogation advantage over newcomers.

PLANETARY RECORD: Carcosa (Styx I)



Planet type Rockball Diameter 10,200 mi. Gravity 1.14 G Density 4.9 Composition Medium-Iron
 Axial Tilt 0° Seasonal Variation None Length of Day 1,240 hours Length of Year 400,000dys/ 57,000 Earth yrs
 Atmosphere: Pressure 0 (None) Type and Composition None
 Climate Cold Temperatures at 30° latitude: Low -384° Average -382° High -380°
 Surface Water 0% Humidity 0% Primary Terrain Melted rock, re-frozen, with thin dust layer
 Mineral Resources: Gems/Crystals Unknown Rare Minerals Unknown Radioactives Unknown
 Heavy Metals Unknown Industrial Metals Unknown Light Metals Unknown Organics Unknown
 Moons None

Biosphere: Dominant life form None
 Other significant life forms None

Civilization: Population(s) 0 (?) Tech Level(s) — Control Rating 0

Society None

Starports None

Installations Suspected criminal rendezvous/refuge

Economic/Production None

Other notes: Map key: Dots indicate sites of huge cities built by original inhabitants

Prohibited due to dangerous nebula and suspected criminal/outlaw infestation

Styx (PSX113A) is affectionately known as "Old Irregular;" Carcosa's distance given below is the average

System Information:

Star Name Styx (PSX113A) Type Neutron star Location Old Frontiers -14/-3/-5

Biozone — Inner Limit — Number of Planets 1

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Carcosa	?	1,600	Rockball	10,200	4.9	1.14	None	Detailed above

Carstairs (Torres IV)

The original colonists on Carstairs were farmers and ranchers, escaping from overcrowded inner worlds. To this day, Carstairs remains a planet of ranchland. Carstairs' southern hemisphere has most of its water; the south is cold but thriving grassland, while most of the north is barren desert, badlands and mountain. As a result, the south is thoroughly, though sparsely, settled, and dotted with small cities and towns.

Carstairs has no planetary government as such. The Carstairs Defense Force, or CDF, is paid for by a 2% "voluntary" levy on income from sales of agricultural products off-planet. It operates a spacewatch with a small but well-equipped normal-space navy. Being purely for planetary defense, it has no starships. The CDF also has a very modern ground force of about 3,000 troops, which does not intervene in local disagreements unless forbidden weapons (see below) are used.

The society is essentially feudal; large ranchowners and townmasters protect smaller ones, in exchange for cooperation and (sometimes) taxes. At any given time, there are a half-dozen small wars going on over grazing rights, water rights, or accusations of rustling. Nuclear and antimatter weapons are not permitted in these brawls — the CDF has the only nukes on the planet — and chemical and biological weaponry that might damage the ranchland is also strictly forbidden.

The agreement that set up the CDF also prevents any Carstairs ranchers from hiring offplanet mercenary units, for fear they'd take over the planet . . . but individual adventurers are welcome to sign up to fight. On occasion, seasoned mercenary units have been brought in a few men at a time. This can win a war when it works, but tends to make its users very unpopular. More often, talented captains are hired, to do the best they can with a motley assortment of thrill-seekers, gunsels, and dregs from Carstairs Startown.

Carstairs exports grain and frozen meat (neobeef and moa) in large quantities. It imports agricultural equipment, as well as quite a bit of weaponry.

A few Precursor ruins have been discovered on Carstairs, but these have amounted to little more than barren building remains. Initial reports of a working Precursor installation were apparently false.

Carstairs Ranch Animals

Neobeef

ST: 60-80	Speed/Dodge: 10/5	Size: 6
DX: 9	PD/DR: 1/2	Wt: 2-3 tons
IQ: 4	Damage: 2 imp#	Origin: SF
HT: 14-16	Reach: C, 1	Habitat: P

Just a very big cow, mutated for extra beef production and increased gravity. Since they were originally bred on New New Texas, where predators are dinosaur-sized, neobeef are *mean*. Carstairs has no native predators larger than a house cat, but most of the ranchers have made no attempt to breed the bad

temper out of the neobeef; as it stands, they will charge anything they see, and rustlers need heavy weapons or armored vehicles.

Beef are found in family groups of (2 dice) adults, plus (1 die) half-sized calves. Damage given is for the horns; anyone trampled by an adult neobeef takes 2 dice crushing damage.

Moa

ST: 40-50	Speed/Dodge: 12/6	Size: 1
DX: 12	PD/DR: 1/1	Weight: 800-1,000 lbs.
IQ: 3	Damage: 2 cr	Origin: SF
HT: 14/24-32	Reach: C, 1	Habitat: P, D

A redevelopment of a prehistoric Earth creature. The moa is a huge flightless bird. It is omnivorous; it eats all sorts of soft vegetable matter, and any small animals it can catch, and turns it very efficiently into *lots* of white meat. They behave a lot like gigantic chickens (they can be trained to come to food, and scatter madly when frightened). However, they are also likely to attack anyone approaching a nest.

Moa wander singly or in small flocks. The beak and claws are both blunt; either does 2 dice crushing damage. Moas do best on the plains, but a tougher, rangier breed is being developed that can live in badlands or desert. If this succeeds, it will be the largest meat animal that can do well, even in small numbers, in such worthless terrain.

Adventures on Carstairs

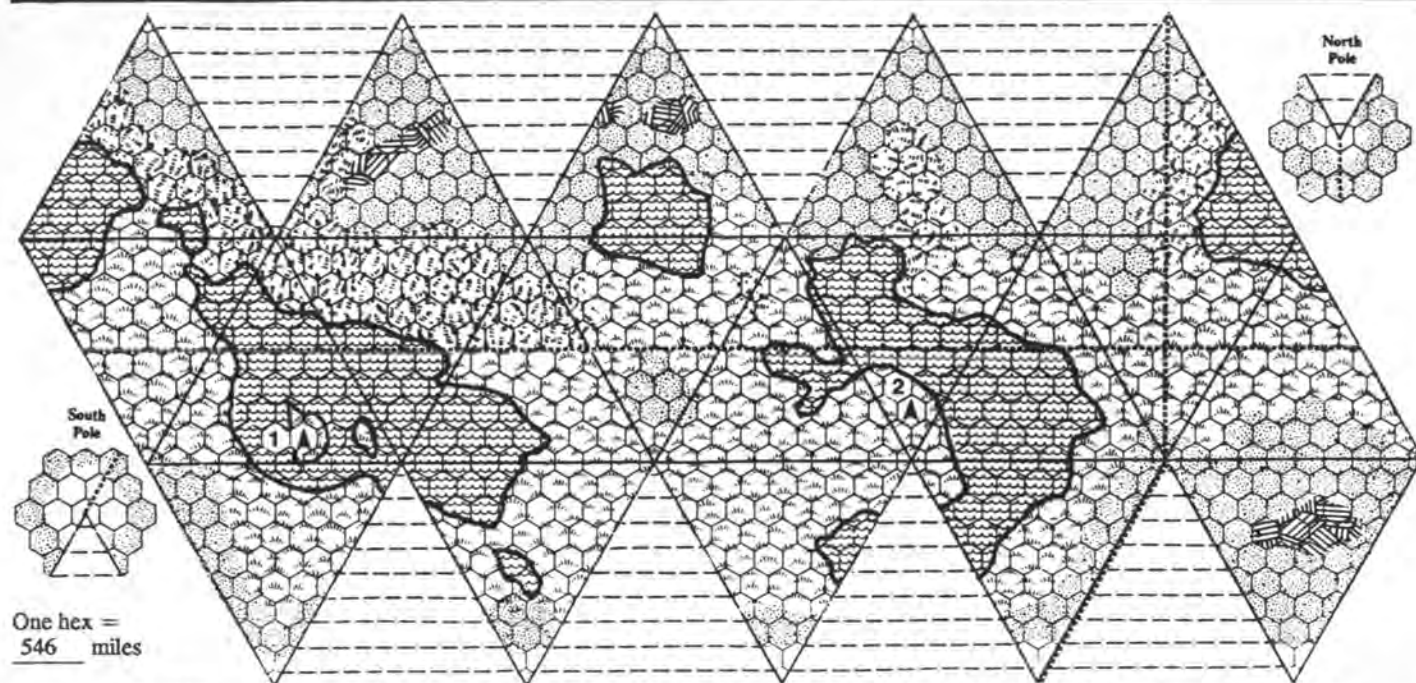
Beacon and Eggs. The PCs are hired to plant a grid of beacons, 200 in all, across several million square miles of Carstairs moa-ranching country. The catch is that they are to do so without the knowledge of the authorities or the ranchers themselves. Not only does this make them pawns in some serious plot (an off-planet invasion? an internal coup? a really big range war?) — it sets them up as targets for every quick-tempered moa rancher in the area, all of whom are viciously competitive and suspicious of egg-nappers. Moa eggs (and moa chicks) are delicious, too. For an added complication, the beacons have to be accurately placed, or their employer won't pay. And one drop area is actually within a Precursor site . . . and every beacon they drop there quits working . . .

Hired Hands, Hired Guns. It's always easy to find work on Carstairs, if you're tough enough. The CDF specifically excludes off-planet mercenary units, but there's always someone raising a private army, to protect their land or take someone else's. In between wars, the hired hands have to deal with the livestock . . . and that's every bit as tough. This scenario can let the GM ring in any Western cliché he likes . . . in battlesuits.

The Mascot. While minding his or her own business on Carstairs, a PC with an appropriate sentimental quirk encounters a poor little lost baby . . . a cute, cheeping moa chick . . . two feet tall, and with an incredible appetite! This can be an adventure hook, if the chick is a specimen of a valuable new breed. Or it can just be a way to drive the rest of the party crazy, especially since moas grow *very* fast.



PLANETARY RECORD: Carstairs (Torres IV)



Planet type Earthlike Diameter 7,800 mi. Gravity .93 G Density 5.2 Composition Medium-Iron
 Axial Tilt 13° Seasonal Variation Minor Length of Day 17 hours Length of Year 1,575 days/ 3.06 Earth years
 Atmosphere: Pressure .91 (Standard) Type and Composition Nitrogen 65%, Oxygen 24%, Helium 3%, Argon 3%, others 5%
 Climate Cool Temperatures at 30° latitude: Low 42° Average 63° High 85°
 Surface Water 22% Humidity 48% Primary Terrain Plains
 Mineral Resources: Gems/Crystals Scarce Rare Minerals Absent Radioactives Scarce
 Heavy Metals Scarce Industrial Metals Scarce Light Metals Adequate Organics Adequate
 Moons None

Biosphere: Dominant life form Grasses, shelled coelenterates
 Other significant life forms Human-introduced plains ecology

Civilization: Population(s) 700 million (PR 8) Tech Level(s) 8(10) Control Rating 1
 Society Unofficial feudal system, in which large landowners protect smaller ones; Carstairs Defense Force (CDF) provides planetary defense
 Starports Class III at CDF headquarters and Carstairs Startown
 Installations Precursor ruins; experimental agriculture stations
 Economic/Production Exports grain, meat; imports weaponry and agricultural equipment

Other notes: Map key: 1. Carstairs Startown 2. Carstairs Defense Force headquarters
 Substantial natural helium deposits lie unexploited

System Information:

Star Name Torres Type F8 V Location Old Frontiers 9/5/3
 Biozone 1.6-2.4 Inner Limit 0 Number of Planets 5

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Firefly	1	.3	Hot rockball	4,100	4.8	.45	None	No recorded landings
Anvil	2	.65	Hot rockball	6,200	6.3	.89	None	High-Iron
Steambath	3	1.0	Hostile terrestrial	7,600	5.2	.91	Very dense CO ₂	No recorded landings
Carstairs	4	1.7	Earthlike	7,800	5.2	.93	Oxygen-Nitrogen	Detailed above
Sylvia	5	3.1	Iceball	2,300	4.0	.21	Trace Hydrogen-Methane	Escott Station (PR 2)

Cretaceous (Braggi II)

Cretaceous is a young planet, geologically unstable. Much of its surface is covered by jungles and forests similar to those of Terra during its Cretaceous Era millions of years ago — hence the name. The widespread volcanic activity on Cretaceous, especially on its as yet unsettled and unexplored equatorial continent, has polluted the atmosphere with ash and sulfurous vapors, giving the air a “rotten-egg” smell. The atmosphere causes respiratory ailments to those who spend too much time here without a filter mask — see below.

Cretaceous has only been seriously colonized in recent years, since the discovery of extensive deposits of fossil fuels beneath its surface. DeMeriville Industries, Ltd., has been granted exclusive rights to exploit the world's mineral wealth. Prior to the oil discovery, the world's population consisted primarily of the xenobiologists at the Escott Institute's research center and a small group of hunter/guides who made their living by running safaris for those who wanted to bag one of the planet's pseudosaurians. There is little in the way of planetary government, and some of the old-timers — who like it that way — fear that DeMeriville will end up owning the planet. Or, perhaps worse, that the large “visitor tax” DeMeriville pays will give the existing government enough of a budget to become a nuisance!

Both starports and settlements are located on the smaller of Cretaceous' two major continents. The larger has not yet been explored, except for a single expedition that, save for one guide, never returned. The survivor brought back wild stories of a primitive saurian race, but no photographs or other evidence, and his tale is not generally believed. Still, little is known about the larger continent, as the volcanic clouds hide much of its surface from detailed orbital photography, and large deposits of radioactive ores seem to interfere with most sensor readings as well.

Filter Masks

For safety, anyone on Cretaceous should wear a filter mask against the ash and sulfides. A Cretaceous filter is not long-lasting, but it is cheap; \$10 for a week's protection. Those who go without a mask suffer no immediate ill effects, but must roll vs. HT+1 at the end of every week. A failed roll means loss of 1 HT from lung damage, which cannot be regained until the victim gets medical care in a clean atmosphere. TL10 medical care can cure 1 HT of this harm in one day; regular first aid won't work.

Generally, nobody is in danger unless they are trapped in the jungle for a long time . . . and in that case, they will have bigger worries.

Native Wildlife

The largest creatures on Cretaceous are the giant dinosaur-like creatures called pseudosaurians. These creatures greatly resemble reconstructions of ancient Terran dinosaurs. Several xenozoologists have pointed to them as proof of the theory of parallel evolution, while others have claimed the pseudosaurians actually are descendants of extinct Terran dinosaurs brought here eons ago by the Precursors. The champions of the latter theory point to the *other* native life found on Cretaceous. With the exception of the various pseudosaurians, all these are five- or ten-limbed.

The pseudosaurians are common around human settlements, and show no fear of man. Therefore, almost everyone on Cretaceous carries a heavy weapon when outside settlement walls. Citizens here can own weapons that are restricted to the army on most planets.

Pseudosaurus loricata (Armorsaur)

ST: 80-100	Speed/Dodge: 10/7	Size: 12+
DX: 15	PD/DR: 4/3	Wt: 3-4 tons
IQ: 4	Damage: 4+2 imp	Origin: Pre/SF
HT: 14-16	Reach: C, 1, 2	Habitat: F, P

Similar to a small tyrannosaurus with armor plate, the Armorsaur is neither the biggest nor the meanest of Cretaceous' fauna. But it is the best-known; it is fast, hard to kill, and quite terrifying enough for most hunters, with its six-inch teeth.

Gasser

ST: 12-20	Speed/Dodge: 2*/8	Size: 1
DX: 16	PD/DR: 2/1	Wt: 80 lbs.
IQ: 3	Damage: 2 cut	Origin: SF
HT: 12/25	Reach: C, 1	Habitat: F

This is a particularly nasty jungle creature, nothing like any known dinosaur. The “Gasser” is a ten-limbed, spined floater which inflates itself with gas and emits it explosively, falling atop a victim. A Vision-3 roll is necessary to see it hanging in the jungle dimness — or a DX-5 roll will hurl a potential victim to the side when the tell-tale explosion of gas is heard. (Of course, if you weren't under it before, you may jump right in the way.) The Gasser's Move is 2 when inflated, 3 on the ground. It grabs its victim with nine legs and attacks with a single specialized saber-limb. It is generally necessary to hack a Gasser to bits to kill it.

If the Gasser misses its attack, it will climb a tree and perch on a branch for several hours until it can re-inflate its gasbag. The creatures have been known to jump off a branch rather than use their gasbags — a quieter but less accurate attack (DX-3 to dodge if the person was paying attention, but no chance to dodge otherwise, because there is no warning sound.)

The Natives (GM's Information)

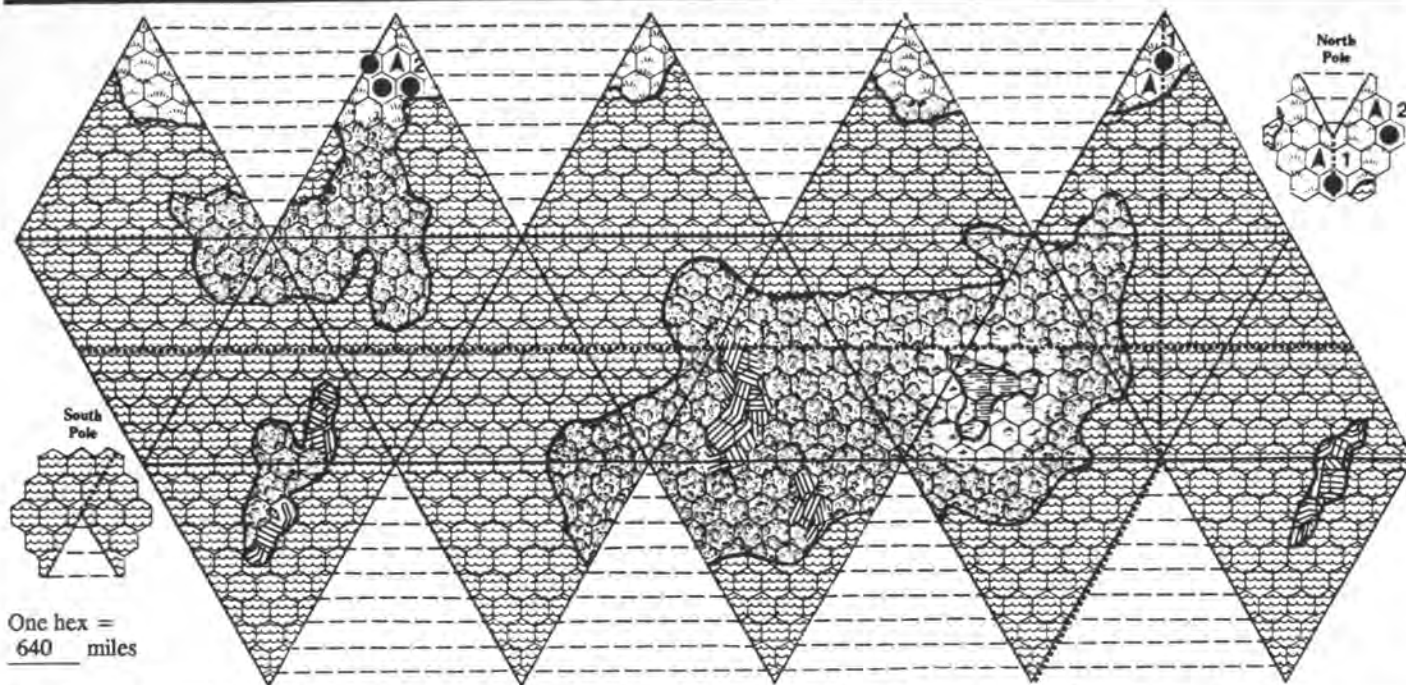
Hidden in the jungles of the unexplored equatorial continent, and especially in the swamps that surround its huge freshwater lake, there is indeed an intelligent race. These beings are 8-foot bipeds, evolved from an ostrich-like pseudosaurian. They are still at a stone-age technological level (TL0), but have a relatively advanced tribal/clan society. They number several million, but can only be discovered by a concentrated ground search, as the scanner readings they produce are indistinguishable from those generated by any other warm-blooded reptilians.

Adventures on Cretaceous

Safari. The PCs are hired as part of a hunting expedition — as survival experts, bodyguards, cooks, or whatever else their talents make appropriate. This can be run as a straight kill-the-monsters expedition, or complications can be introduced. For instance, the safari client could be an introspective, bookish fellow who seems fascinated by the planet, but not at all interested in killing pseudosaurians. Is this industrial espionage? Or something else?

Prospecting. The unexplored Main Continent holds rich resources and an undiscovered native race — see above. The PCs could be hired for an exploring trip, either by DeMeriville or by a competitor. Or it might occur to them to make a quick unsponsored trip, in hopes of selling the information to the highest bidder.

PLANETARY RECORD: Cretaceous (Braggi II)



Planet type Terrestrial greenhouse Diameter 9,150 mi. Gravity .94 G Density 4.5 Composition Low-Iron
 Axial Tilt 2° Seasonal Variation None Length of Day 21 hours Length of Year 162 days/ 141 Earth days
 Atmosphere: Pressure 1.3 (Dense) Type and Composition Polluted — Nitrogen 74%, Oxygen 17%, SO₂ 5%, others 4%
 Climate Hot Temperatures at 30° latitude: Low 92° Average 111° High 130°
 Surface Water 64% Humidity 88% Primary Terrain Jungle
 Mineral Resources: Gems/Crystals Absent Rare Minerals Adequate Radioactives Plentiful
 Heavy Metals Adequate Industrial Metals Ample Light Metals Adequate Organics Ext. Plentiful
 Moons None

Biosphere: Dominant life form Large reptiles
 Other significant life forms Multi-limbed crustaceans and insects; large, armored fish

Civilization: Population(s) 26,800 (PR 4) Tech Level(s) 10 Control Rating 2/1*

Society Loose Athenian democracy — everyone over 16 votes; no taxes, except on visitors and "outside" industry

Starports Class III at Port Dinosaur; Class III at DeMeriville site (private port)

Installations DeMeriville drilling site

Economic/Production Tourism — pseudosaur hunting safaris; some petroleum and radioactive mining

Other notes: Map key: 1. Port Dinosaur 2. DeMeriville drilling site and starport

* Weapons CF I, due to dangerous pseudosaurians

System Information:

Star Name Braggi Type K2 V Location Old Frontiers 5/-11/1
 Biozone 0.5-0.6 Inner Limit 0 Number of Planets 5

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Furnace	1	.2	Hot rockball	6,250	4.7	.67	None	No recorded landings
Cretaceous	2	.55	Terrestrial greenhouse	9,150	4.5	.94	Polluted Oxy-Nitro	Detailed above
Obnoxious	3	.9	Gas giant	62,500	1.6	2.29	Hydrogen-Methane	Only 5 moons
—	4	1.6	Asteroid belt	—	—	—	—	—
Invidious	5	3.0	Gas giant	36,400	2.1	1.75	Hydrogen-Helium	Faint ring
—	6	5.8	(Empty orbit)	—	—	—	—	—
Noncaloricous	7	11.4	Iceball	3,750	2.9	.25	None	—

Drayhoah (Light I)

The planet now known as Drayhoah, in the system now known as Light, was originally known as Theron, circling the star Barnnetta. Both names were changed after a religious reformation. Almost overnight the world was transformed into a theocratic state that recognized only one religion — that of the mystic warrior-priest Jayar, who took the name of his revealed god, becoming Jayar Drayhoah.

Following his exile/escape from Bannar (see p. 16), Drayhoah and his followers settled on Theron, where he began to teach his mystic faith. Within a decade, the entire population of the planet had either converted to Drayhoahism or had emigrated. Several theories have been advanced to account for the Drayhoah phenomenon. One is that Drayhoah was a powerful psionic talent who cloaked his activities under the guise of religion. Another is that his strange staff, which he claimed was a gift from his god, is actually a technological device that enabled him to bend minds to his will.

In the following 60 years, the Drayhoans have continued to do their best to export their faith to other planets. They actively compete with the Bannarites, with a degree of success that has astonished both theologians and politicians.

The current prophet of the religion claims to be the original Jayar Drayhoah (highly unlikely, considering the faith's ban on anti-agathics and other artificial methods of life-extension). Members of the cult believe this completely, and have been known to become violent if "blasphemers" disagree.



Warning: In general, visitors should avoid religious discussion of any type while on Drayhoah, listening politely and saying nothing. Permanent residents of Drayhoah are required to belong to the faith. Visitors have "freedom of religion," in that they are not required to convert, but must not commit blasphemy. This includes any public display of non-Drayhoan religious symbols, swearing by any god whatsoever, or — very definitely — any advocacy of any religion except that of Drayhoah. The legal punishment for blasphemy is mindwipe. For a small blasphemy, a large donation, discreetly made, will erase the offense. But some offenders never reach the jail; they are torn to pieces first.

The planet Drayhoah itself is Earthlike but warmer, with a large population and a well-balanced economy. Some areas on the three largest continents are almost completely urbanized, and all arable land on the world has been brought under cultivation.

Drayhoah natives wear cloaks and robes outdoors to protect themselves from the sun. Martial arts are very popular, and are taught in the schools. As part of the Drayhoan reverence for life, almost everyone keeps pets. Hunting is prohibited, and some large and dangerous "game" animals are tamed and kept as watch-beasts. However, the culture is not regressive; high technology is prized, and computers are everywhere.

Jayar Drayhoah (GM's Information)

The current Jayar Drayhoah is the original, whose life has been prolonged unnaturally by the power of his staff of office — which is a Precursor artifact that the prophet discovered on Carstairs. The staff acts as a powerful psionic amplifier, increasing the possessor's own talents and power to superhuman degrees. Drayhoah is himself a powerful psi. This, coupled with the staff's amplification, enabled him to control minds to a degree that he hopes will eventually spread his creed — about which he is totally sincere — through all space.

Should PCs have the unique opportunity of meeting Drayhoah, they will find he has ST 11, DX 14, IQ 12, HT 12, with the following abilities: Telepathy power 15, with skills Psi Sense-11, Emotion Sense-15, Telesend-15, Telereceive-15, Mind Shield-15, and Telecontrol-14.

His staff effectively adds 6 to his Telepathy power. In fact, it will add 50% to the raw Power of anyone with a psi talent. It will not aid Skill at all.

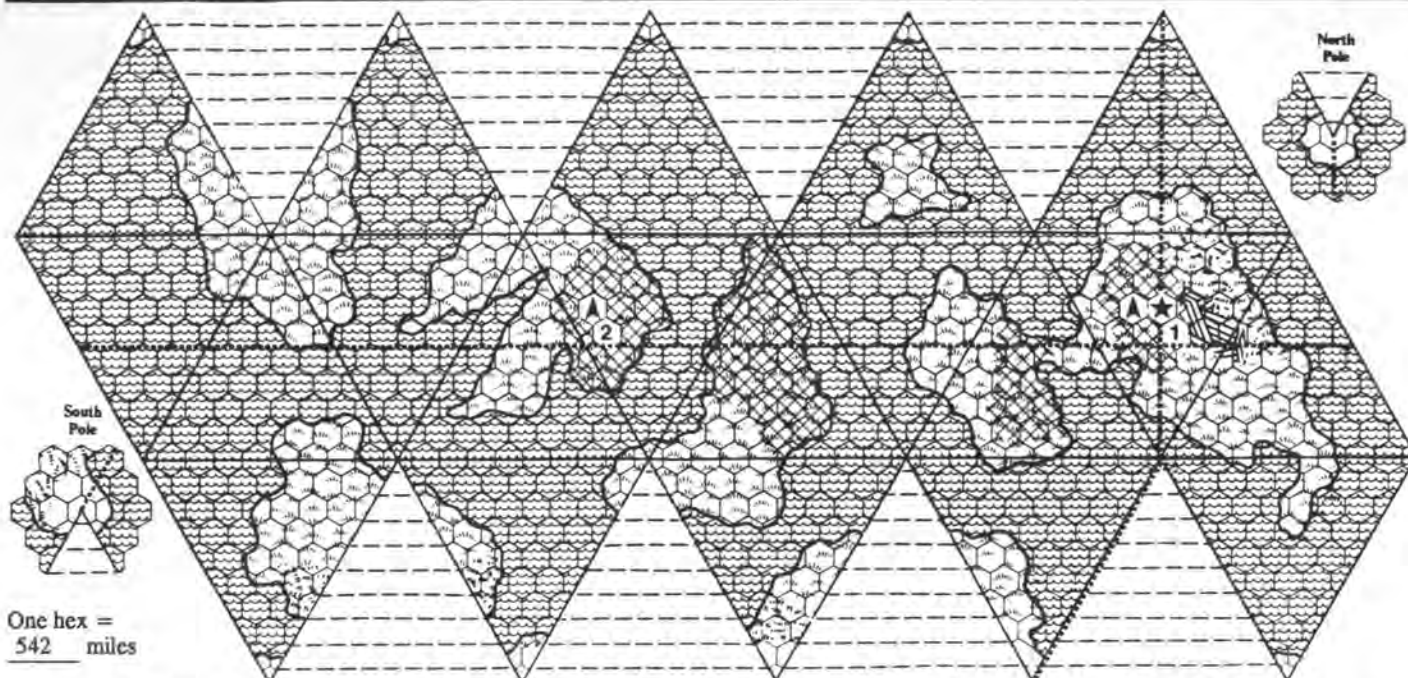
Adventures on Drayhoah

Spreading the Faith. Anyone visiting Drayhoah will be the subject of active recruiting attempts, especially if they have their own starship. Members of the faith (which includes everyone on the planet — will be friendly — sometimes very friendly — and then use this friendship to try to convince the visitors to convert. If the PCs do join the faith, or pretend to, they will be given a variety of assignments offplanet, most of them espionage-oriented; Drayhoah wants to soften up its neighbors for a conquest that might be religious, military, or both.

Somebody's Got To Do It. The PCs, whether for pay or due to their own religious beliefs, attempt to assassinate Drayhoah. This might be easier than one would expect; though he is well-guarded, he tolerates no other psi abilities in his neighborhood. So his bodyguards are devoted, and they have good technology and guard animals, but none of them have any psi talents at all. Still, the prophet himself is formidable and merciless.

Variation: The PCs don't want Drayhoah's life at all . . . they want to steal his staff!

PLANETARY RECORD: Drayhoah (Light I)



Planet type Earthlike Diameter 7,750 mi. Gravity .82 G Density 4.6 Composition Medium-Iron
 Axial Tilt 28° Seasonal Variation Earthlike Length of Day 25 hours Length of Year 118 days/ 122 Earth days
 Atmosphere: Pressure 1.1 (Standard) Type and Composition Nitrogen 80%, Oxygen 18%, Argon 1%, others 1%
 Climate Warm Temperatures at 30° latitude: Low 69° Average 90° High 110°
 Surface Water 66% Humidity 45% Primary Terrain Plains (mostly farms)
 Mineral Resources: Gems/Crystals Scarce Rare Minerals Scarce Radioactives Scarce
 Heavy Metals Scarce Industrial Metals Plentiful Light Metals Scarce Organics Plentiful
 Moons 2 small moons (Honor and Loyalty); 1 large moon (Obedience)

Biosphere: Dominant life form Earthlike ecology with advanced mammals and avians
 Other significant life forms Some imported livestock on farms

Civilization: Population(s) 9.5 billion (PR 9) Tech Level(s) 10 Control Rating 5

Society Theocracy — patriarchal, but otherwise, leaders are chosen for faith and intelligence

Starports Class V at Discipline; Class II at Humility

Installations Various technological research institutes, both private and governmental; hundreds of religious centers

Economic/Production Exports a wide variety of manufactured goods, as well as its state religion; must import a variety of minerals

Other notes: Travelers should make allowances for the extreme religious intolerance of the natives

Map key: 1. Discipline 2. Humility

System Information:

Star Name Light Type K6 V Location Old Frontiers 5/7/4
 Biozone 0.5-0.6 Inner Limit 0 Number of Planets 5

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
—	1	.1	(Empty orbit)	—	—	—	—	—
Drayhoah	2	.5	Earthlike	7,750	4.6	.82	Oxygen-Nitrogen	Detailed above
Faith	3	.9	Terrestrial	11,350	3.2	.83	Very thin Oxy-Nitrogen	Might be terraformable
Temperance	4	1.7	Gas giant	73,500	1.3	2.18	Hydrogen-Methane	Faint ring
Purity	5	3.3	Gas giant	42,000	1.1	1.06	Hydrogen-Helium	—
Chastity	6	6.5	Gas giant	31,300	.8	.57	Hydrogen-Helium	Faint ring

Dunsel (Gules I) — *Restricted*

The planet Dunsel, a damp, forested world, was originally settled by a group of neo-Luddites who firmly believed that higher technology was the root of all mankind's evils. Upon landing, the colonists immediately blew up their ship, then destroyed all vestiges of any technological item or teachings higher than TL3. They then settled down to live a medieval, back-to-basics lifestyle, shunning contact from other worlds. Only one continent is inhabited, as far as anyone knows; the original colonists kept nothing which would have let them cross oceans.



Dunsel did not join the stellar community willingly; it simply had no choice, as trade and travel in the sector became more active. The clan chiefs bowed to necessity and permitted construction of a starport under the condition that the spacers recognize their authority and help preserve their way of life. Outside the starport, possession of any technology higher than TL3 remains illegal.

But Dunsel changed forever when its loose government allowed religious missionaries from Bannar to teach on the planet — provided they did so using TL3 methods only. The materialistic Bannarite religion held an odd appeal for those latter-generation Dunsels, who'd never known anything better than a harsh medieval existence. Within a few decades, most of the Dunsel clans near the starport had accepted the Bannarite religion, and happily installed the Bannarite priests as their new leaders.

Meanwhile, clan leaders farther away from the starport, seeing the results of Bannarite teachings, closed the door to the missionaries. Dunsel became a battleground. Officially, the conflict is purely internal, clan versus clan. Unofficially, hundreds (if not thousands) of "volunteers" from Bannar itself are swell-

ing the Bannarite ranks on Dunsel. It is an open secret that Bannar plans to conquer Dunsel entirely. But to do so, it will have to take control of enough clans to officially change the Starport Agreement.

However, under the agreement by which trade with Dunsel was opened, the prohibition against technology higher than TL3 remains. And, under pressure from Bannar's interstellar rivals, that prohibition has been enforced. Thus, the slow war for Dunsel is fought with swords and axes. There are many groups elsewhere who would be happy to help the traditionalists resist the Bannarites . . . but the traditionalists won't use modern weapons, don't need money, and don't really like *any* offworlders.

The two types of Dunsel clansmen can easily be distinguished. Old-line Dunsels dress in heavy cloth of forest colors, with bone ornaments. Bannarite clansmen dress in the same materials, but their clothing is brightly-colored, and cut in imitation of modern styles; they wear ornamentation of whatever metal or electronic scraps they have been able to pick up. The Bannarite tribesmen, encouraged by their priests, are working for the day when the blessings of high technology will come to their world. The traditionalists are equally vehement in their desire to cleanse their planet of alien thought and return to the purity of their fathers. Both sides are fanatics. The Summersun mercenary squad that guards the small starport have standing orders not to allow visitors to leave the starport with any item of TL4 or higher technology and to warn any visitors to the world that, should they break any religious taboos on Dunsel, they are on their own.

Adventures on Dunsel

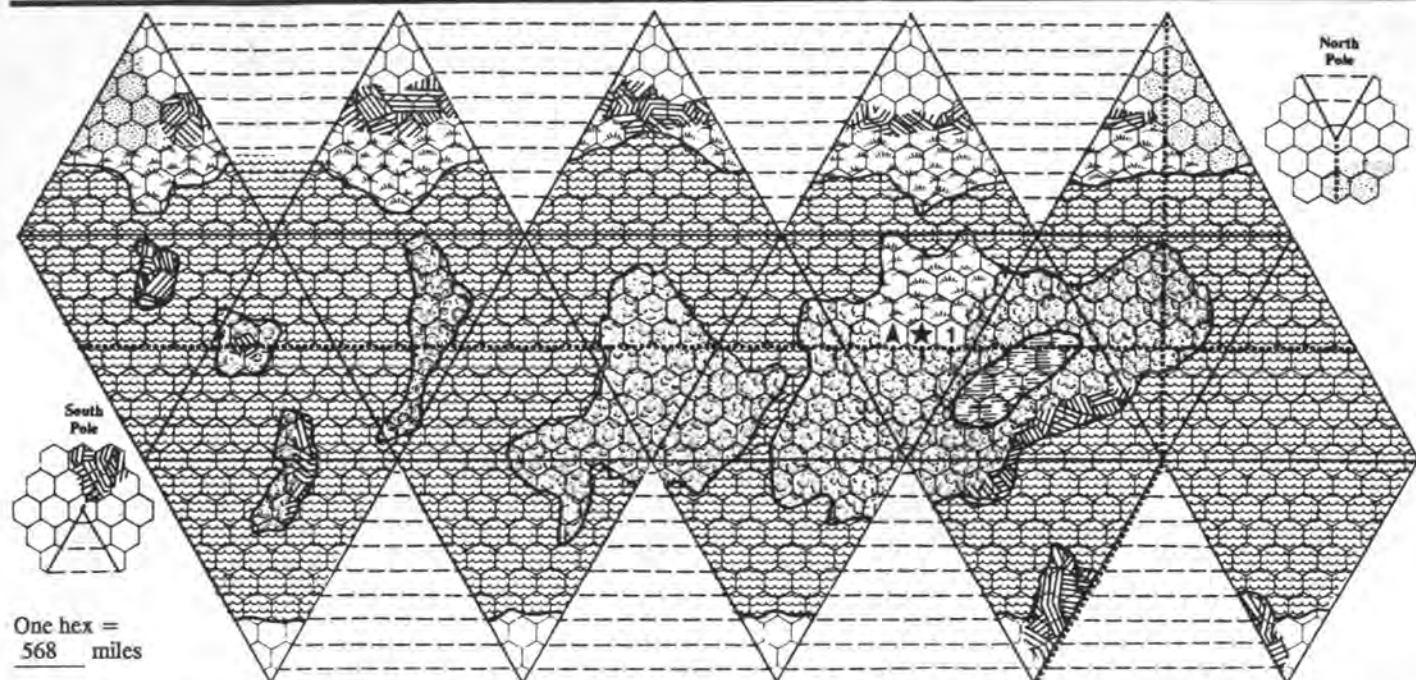
Ace in the Hole. In direct violation of the Starport Agreement, the Bannarites have established a high-tech garrison, stationed at the Bannarite Temple. This is an infantry

unit of about 1,200 troops, armed with the most modern weapons. They plan a blitzkrieg assault against the most powerful traditionalist clans; if they move quickly enough, they can take the clan leaders hostage, and dominate the planetary government. Then they'll change the rules to make everything they did legal . . .

The PCs may become involved as innocent bystanders; as agents for the Drayhoans; or as agents of part of the interstellar government, keeping an eye on this particular trouble-spot. It won't be necessary to wipe out the Bannarite division to scotch the plan; just getting offworld with proof of its existence would be enough.

The Squatters. Dunsel has a lot of totally unused land; the north polar continent has fertile plains, and the smaller central land mass has huge forests. Orbital scans also show a variety of natural resources. But nobody can move in . . . legally. This might not stop a colony group desperate for good land — or a corporation hungry for natural resources — or even a noble or magnate who wanted a private continent. And the PCs could be on either side of such a situation, or stuck in the middle.

PLANETARY RECORD: Dunsel (Gules I)



Planet type Earthlike Diameter 8,120 mi. Gravity .78 G Density 4.2 Composition Low-Iron
 Axial Tilt 23° Seasonal Variation None* Length of Day 27 hours Length of Year 5.6 days/ 6.3 Earth days
 Atmosphere: Pressure 1.05 (Standard) Type and Composition Nitrogen 78%, Oxygen 19%, CO₂ 2%, others 1%
 Climate Cool and rainy Temperatures at 30° latitude: Low 42° Average 63° High 82°
 Surface Water 62% Humidity 68% Primary Terrain Forest
 Mineral Resources: Gems/Crystals Scarce Rare Minerals Scarce Radioactives Scarce
 Heavy Metals Scarce Industrial Metals Scarce Light Metals Ample Organics Ample
 Moons 1 medium moon — Argent

Biosphere: Dominant life form Advanced mammals and flowering plants
 Other significant life forms Ecology is similar to Earth's except that avians never developed; a few species of flying mammals exist

Civilization: Population(s) 1.3 million (PR 6) Tech Level(s) 3/10** Control Rating 1/5***

Society Tribal/Clan, with a ruling body made up of clan leaders

Starports Class III at Dunsel Port

Installations Bannarite religious center at Dunsel Port

Economic/Production Most residents are subsistence farmers; Barter economy prevails

Other notes: Map key: 1. Dunsel Port.

* With a 6-day year, Dunsel's seasons are non-existent, but there is a 6-day, 40° temperature fluctuation cycle caused by the axial tilt

**Vast majority of residents live at TL3; TL is 10 only at Dunsel Port

*** No TL4+ equipment is allowed outside Dunsel Port

System Information:

Star Name Gules Type M2 V Location -14/11/-11
 Biozone 0.1-0.2 Inner Limit 0 Number of Planets 6

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Dunsel	1	0.1	Earthlike	8,120	4.2	.78	Oxygen-Nitrogen	Detailed above
—	2	0.3	(Empty orbit)	—	—	—	—	—
Sable	3	0.5	Rockball	7,250	5.2	.86	None	—
Or	4	0.9	Gas giant	37,200	2.1	1.79	Hydrogen-Helium	Faint ring
Azure	5	1.7	Iceball	1,325	1.4	.04	Trace fluorine	Bacterial life
—	6	3.3	Asteroid belt	—	—	—	—	—
Verte	7	6.5	Gas giant	82,300	1.9	3.58	Hydrogen-Methane	Verte and Purpure are a
Purpure	7a	6.5	Gas giant	68,000	2.3	3.58	Hydrogen-Methane	double planet system

Gith (Stronti I) — *Restricted*

Gith is a cold, hostile world, one of only two in the Stronti system. The planet itself is unremarkable, except as a base for scientific research into the system itself. The only settlements on Gith are two scientific research stations, one manned and run by Survey, the other a private research facility operated by the Escott Institute. The Institute, as the employer of the entire civilian population, is the nominal "government" of the planet.

What makes the Stronti system the subject of intense scientific research are the numerous "gravitational anomalies" orbiting the sun and planets. These are point sources of intense gravitational waves. Several orbit the star Stronti; each "empty" orbit, up to #9, has one anomaly. And several orbit outside the plane of the ecliptic at varying — and shifting — angles of inclination.

There are also anomalies in orbit around the system's two worlds — five around Gith and three around the gas giant Fodor — and six in the asteroid belt.

Although in some ways consistent with the theoretical properties of quantum black holes, the anomalies differ greatly in others. The orbital positions of the anomalies seem to change irregularly, as do the intensities of their gravitational fields. This makes navigation through the Stronti system difficult, and sometimes extremely hazardous.

The five gravitational anomalies in orbit around Gith cause fluctuations both in the planet's rotational period and in its axial tilt. The former varies from as little as nine hours to as much as 72 hours, the latter from 10-80 degrees. As a result, conditions on the planet can be quite unstable. What little atmosphere Gith has is usually violently agitated, and earthquakes are common; the two research stations are located on comparatively stable geological zones. Ice caps have not formed. What little water Gith retains slops violently around in the ocean basins, agitated by choppy tides and the irregular motions of the planet itself.

The six anomalies in the asteroid belt, unlike the others in the system, do not fluctuate in strength. The composition and orbits of the asteroids themselves are more consistent with a destroyed world than with a world that simply failed to form, and most researchers in the Stronti system feel that there was indeed a world there until it was torn apart by the anomalies that

now orbit in the belt. However, this fails to explain why those six anomalies, alone in the system, behave "normally."

The three anomalies around Fodor, the system's gas giant, seem to have little effect on that world, except for increasing the severity of storms in its thick atmosphere.

Many theories exist to explain these anomalies — none acceptable to the entire scientific community. The two most prominent are that the anomalies are indeed a form of miniature black hole, or that they are artificial — some sort of Precursor artifact of unknown purpose. One variant on the latter theme is that the anomalies are some type of stargate. According to this theory, the changes in intensity of the anomalies signal changes in their destinations. So far, no confirmation of this or any other theory has been possible; probes sent in close enough to study the anomalies have all been destroyed before gathering much useful data — destroyed or sucked through to somewhere else, if the "Precursor stargate" theory is correct.

The entire system has been rated a Restricted zone. The Patrol maintains an emergency station in the system's asteroid belt, the "calmest" region within the entire system.

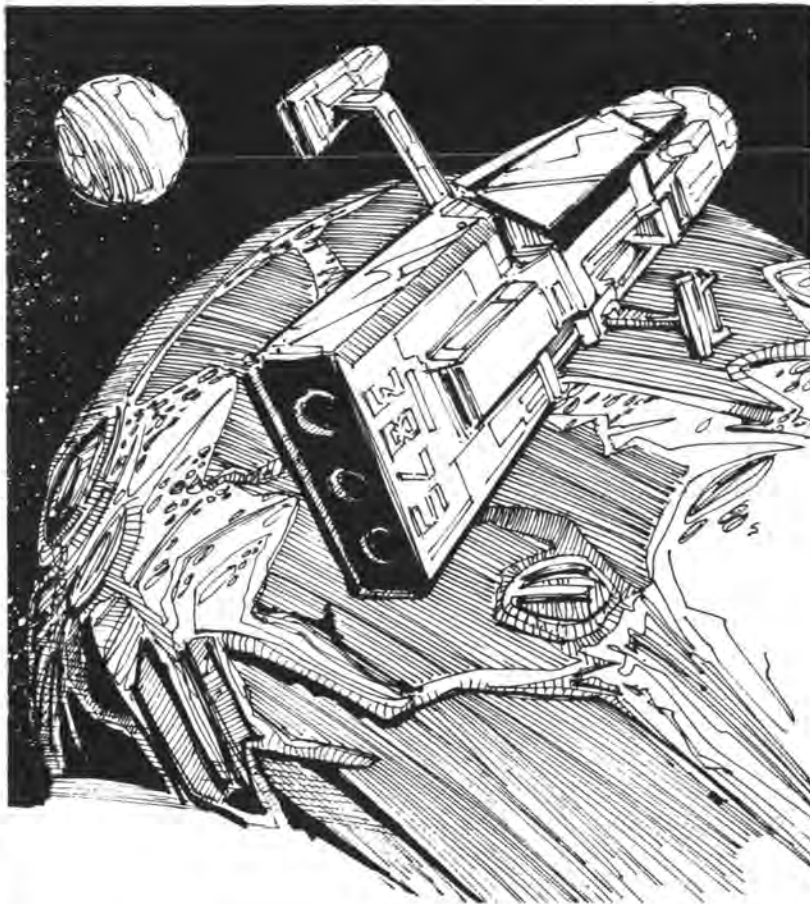
Adventure on Gith

Black Hole Blues.

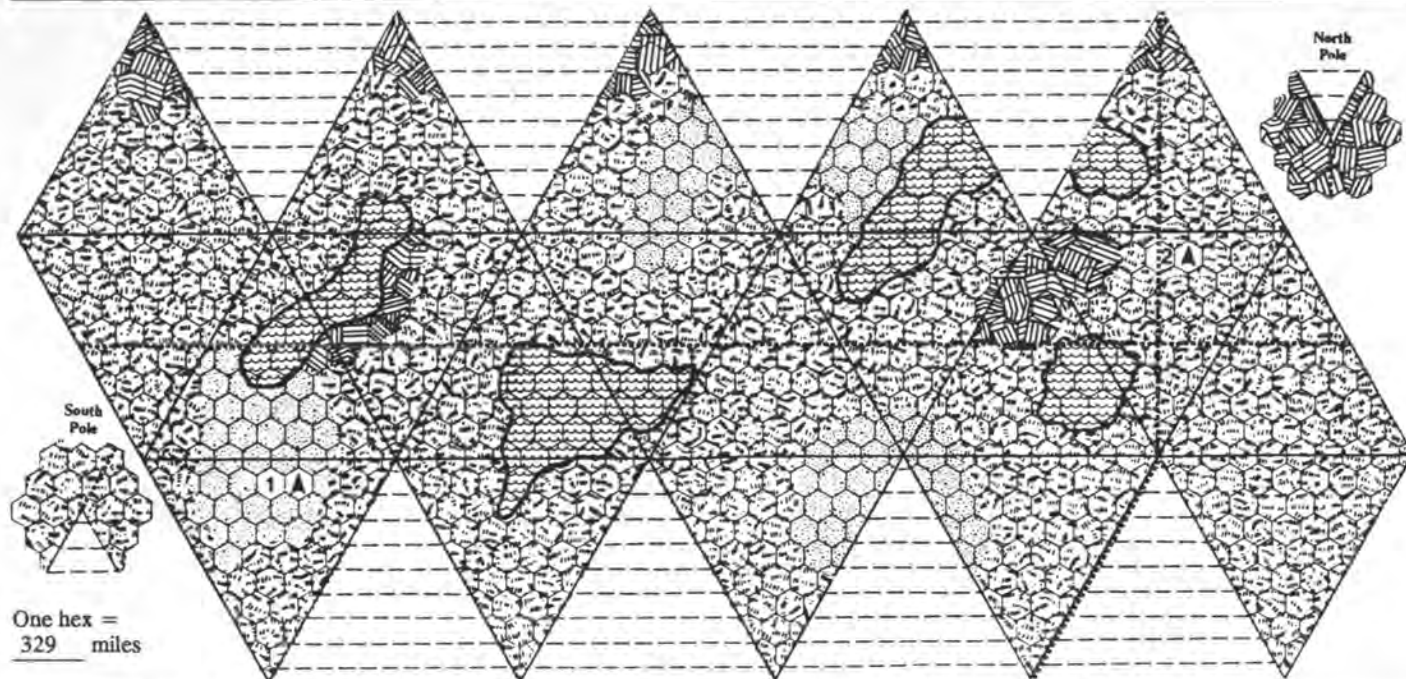
The PCs might come to Gith as part of any adventure

involving the Escott Institute. Because the system is Restricted, they must either sneak in or announce their presence to the Patrol. Once there, they may become involved with the "anomalies." They might be called upon to rescue a vessel damaged by the unpredictable gravity wells; their own ship might be the one damaged (especially inconvenient if they were in the system covertly). Or they might have the opportunity to investigate the "stargate" theory for themselves.

A possible complication: The anomalies do indeed form a stargate. The science is far past current human understanding. But with the aid of an unidentified artifact — a 12-sided object about a foot in diameter — picked up in another system, the PCs can safely travel through the gate. They can't pick their destination, but they can survive the trip, to come out in another anomaly-plagued star system somewhere else. If the "key" artifact is unique, the gate's value is limited; if there are dozens or hundreds floating around human space, then Gith may become the gateway for a whole new area of human expansion.



PLANETARY RECORD: Gith (Stronti I)



Planet type Rockball Diameter 4,700 mi. Gravity .33 G Density 3.1 Composition Low-Iron
 Axial Tilt Varies Seasonal Variation Extreme Length of Day Varies Length of Year ? days/ 4.19 Earth years
 Atmosphere: Pressure .75 (Thin) Type and Composition CO₂ 81%, Methane 15%, Nitrogen 3%, Hydrogen 1%
 Climate Cold Temperatures at 30° latitude: Low 10° Average 30° High 50°
 Surface Water 10% Humidity 13% Primary Terrain Rocky hills and plains
 Mineral Resources: Gems/Crystals Scarce Rare Minerals Scarce Radioactives Scarce
 Heavy Metals Absent Industrial Metals Scarce Light Metals Ample Organics Absent
 Moons None

Biosphere: Dominant life form None
 Other significant life forms None

Civilization: Population(s) Escott — 5,000; Survey — 650 (PR 3) Tech Level(s) 10 Control Rating 4*

Society Bureaucratic — administered by Escott Institute

Starports Class II at Escott Station and Survey Station

Installations

Economic/Production

Other notes: Map key: 1. Escott station; 2. Survey station. *All weapons are strictly prohibited on Gith

Restricted due to gravitational anomalies — see text

System Information:

Star Name Stronti Type F8 V Location Old Frontiers -11/1/1
 Biozone 1.6-2.4 Inner Limit 0 Number of Planets 2

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
—	1	0.5	(Empty orbit)	—	—	—	—	—
—	2	.9	(Empty orbit)	—	—	—	—	—
—	3	1.3	(Empty orbit)	—	—	—	—	—
Gith	4	2.1	Rockball	4,700	3.1	.33	Thin CO ₂ -Methane	Detailed above
—	5	3.7	(Empty orbit)	—	—	—	—	—
—	6	6.9	Asteroid belt	—	—	—	—	—
—	7	13.3	(Empty orbit)	—	—	—	—	—
—	8	26.1	(Empty orbit)	—	—	—	—	—
Fodor	9	51.7	Gas giant	73,000	1.8	3.01	Hydrogen-Methane	1 moon w/ inclined orbit

Hali (Korinna I)

Hali and its sister planet Hamish make up a double world. Hali is the larger of the two planets, but far less hospitable. The system's government, and the majority of its population, is located on Hamish (see next entry).

Hali is a cold, hostile world that nevertheless is very valuable, thanks to its deposits of organic material and several rare minerals, including metallic lithium. Most of the population lives underground, in artificially constructed caverns. These caverns have been expanded many times in the past few hundred years to accommodate Hali's growing population.

The surface of Hali itself is treacherous because of fierce storms that spring up almost out of nowhere. The planet has no surface water; it is all locked up in ice. A long-term terraforming project is under way, but so far only a small area around Haliport, the capital city, has vegetation. Hali's air is breathable with a filter and respirator; filter cartridges (to remove the sulfur compounds) cost \$20 and last a month.

The tidal effects of the double-planet system affect Hali greatly. Vulcanism is common. The living areas have to be well-constructed, because they are shaken daily by earthquakes.

On the whole, the planet is an uncomfortable place to live. Even so, Hali's mineral wealth continues to attract immigrants, causing even more overcrowding and expansion of the underground habitats. Any job on Hali will pay at least 50% over standard rates, but living conditions are crowded and uncomfortable, and most mining work is dangerous. And when an especially bad quake collapses a tunnel, *everyone* is in danger.

Hali-Hamish Shuttle

A large fleet of interplanetary shuttles make the Hali-Hamish run. At 1-G acceleration, a ship can make the .05-AU trip either way in 16 hours. Most shuttles are slower, though, making the trip in about a local day.

The Kisumu Class Heavy Shuttle is typical of the large interplanetary merchantmen that make the run between Hali and Hamish. It is built from standard plans in widespread use throughout the sector. The interplanetary equivalent of a passenger/freight train, a Kisumu carries 300 passengers in small berths, and can stow 500 tons of cargo in its 1,000-cy hold.

A Kisumu is 10 yards wide, 10 yards high and over 90 yards long, with a wingspan of 75 yards. The ship is built with a TL9 hull and fusion plant, for economy, but its thrusters are up-to-date, boosting the ship at .33 G loaded or .50 G light. Two large airlocks admit passengers while the ship is at dock; there are two

one-man maintenance airlocks for crew service, and two more one-man locks for access to the cargo bay. The bay doors swing open for loading, requiring the entire cargo deck to depressurize. The ship is braced for 1 G, by default, and has heavy compartmentalization, by safety regulations.

In addition to the 300 passengers, the ship carries a 20-man crew: a captain, an executive officer, two pilots, seven engineers, one medical officer, and eight stewards. The living and work areas have artificial gravity, but the rest of the ship, including the cargo bay and most of the engine rooms, does not. The full life-support recycling system has a rated capacity of 352, a 10% safety margin; the system needs very little maintenance or upkeep, requiring at most a thorough cleaning and recharge every six months.

A Kisumu requires a 7,500-cy boat bay if carried as a larger ship's auxiliary. It masses 1003 tons without passengers or cargo but with crew; it can carry 500 tons of cargo, and its fully loaded mass is 1,527 tons. A Kisumu costs \$18,397,527.

At .33 G, the .05 AU trip from Hali to Hamish takes just under 27 hours. The berths carry four passengers each, in moderate comfort. The trip costs \$150, or \$500 for first class (which includes a private compartment and room service for meals). Each passenger is allowed 250 lbs. and ¼ cy of luggage; every additional luggage space costs \$25.

Though the ship is only rated for a maximum of 500 tons of cargo, there is room in the hold for more than that. The ship will be able to operate safely in the gravity wells of Hali and Hamish with up to 270 extra tons of cargo; when overloaded thus, the ship accelerates at only .28 G. There is no practical limit to the mass on trips between *orbits*, when the ship is not expected to land.

Adventures on Hali

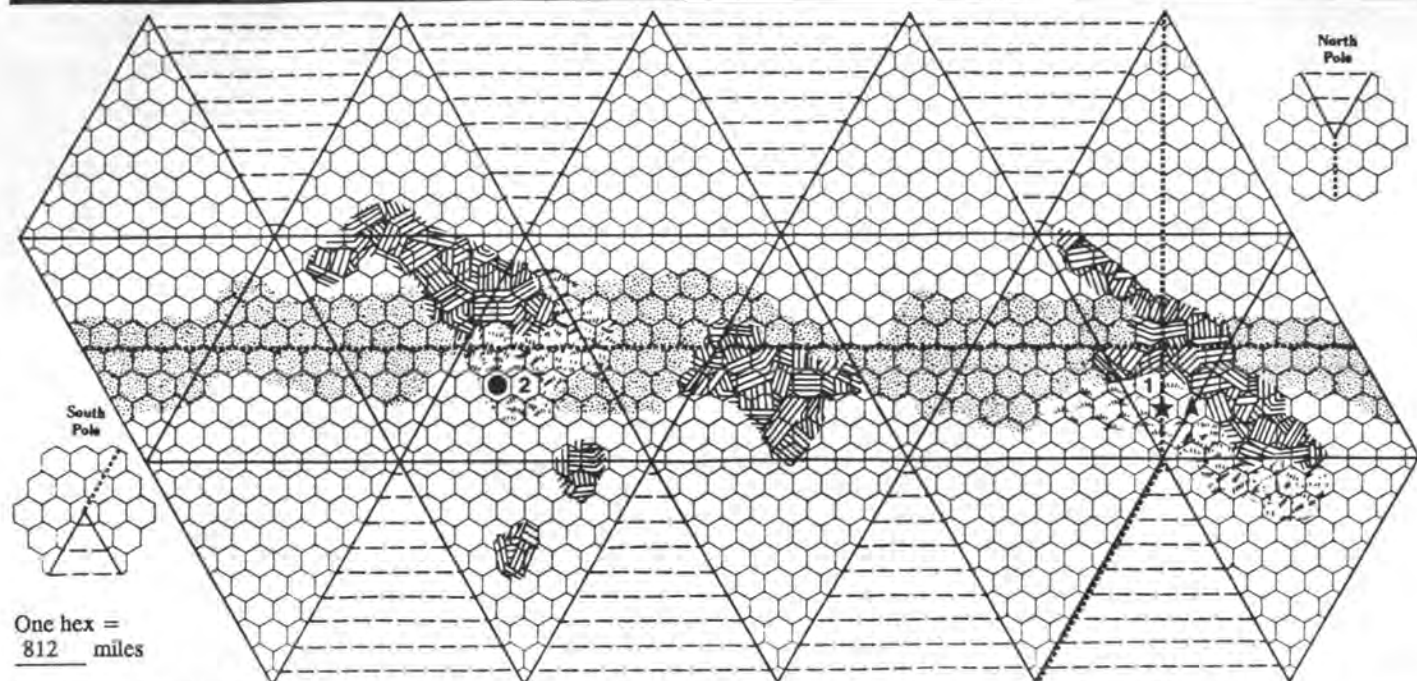
Tunnel 884D. A new underground living area, almost ready for opening, has suddenly been sealed off due to "geological instability." But that seems unlikely; the planners and geologists of Hali are expert, since they have to deal with severe quakes almost daily. Rumors are beginning to circulate about what might really have been discovered: precious gems, Precursor artifacts, alien life . . . If the PCs sneak in and investigate, they'll have a whole underground town to search, brand-new but deserted except for guards. What will they find?

Take A Deep Breath. The parties, along with a mixed bag of NPCs, are in a pressurized railcar, speeding beneath the surface of Hali . . . when a quake hits. The tunnel collapses behind the car, cutting off the power. There may be a collapse in front, as well. Radios aren't working. And the car's air supply is limited.

Some of the NPCs seem tough and nasty enough to kill for air; others are obviously in need of protection (potential here for a romantic interest). The PCs have vacc suits and air masks, but if they open the railcar, they'll lose some of its air, shortening the lives of the unsuited passengers. On the other hand, there doesn't seem to be much that anybody can do from inside . . .



PLANETARY RECORD: Hali (Korinna I)



Planet type Rockball Diameter 11,600 mi. Gravity .85 G Density 3.2 Composition Low-Iron
 Axial Tilt 0° Seasonal Variation None Length of Day 33 hours Length of Year 89 days/ 122 Earth days
 Atmosphere: Pressure .6 (Thin) Type and Composition Nitrogen 70%, Oxygen 13%, Sulfur compounds 10%, others 7%
 Climate Frozen Temperatures at 30° latitude: Low -35° Average -10° High 3°
 Surface Water 0% Humidity 17% Primary Terrain Desert and ice plains
 Mineral Resources: Gems/Crystals Scarce Rare Minerals Plentiful Radioactives Scarce
 Heavy Metals Scarce Industrial Metals Plentiful Light Metals Ext. Plentiful Organics Plentiful
 Moons None

Biosphere: Dominant life form No native life
 Other significant life forms Tundra vegetation in terraforming project around Haliport

Civilization: Population(s) 15 million (PR 7) Tech Level(s) 10 Control Rating 3

Society Representative democracy, but mining installations are administered by owning corporations

Starports Class IV at Haliport

Installations Several mines and refineries; Hali/Hamish Terraforming Research Institute (in Haliport); Navy base at Haliport

Economic/Production Exports large quantities of light metals; Must import most foodstuffs and organic goods

Other notes: Map key: 1. Haliport 2. Coldsnap

System Information:

Star Name Korinna Type K4 V Location Old Frontiers 5/3/-8
 Biozone 0.5-0.6 Inner Limit 0 Number of Planets 7

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Hali	1	.5	Rockball	11,600	3.2	.85	Polluted Oxygen-Nitrogen	Hali and Hamish are a double world system
Hamish	1a	.5	Earthlike	5,600	6.6	.85	Oxygen-Nitrogen	
Dennbye	2	.8	Gas giant	23,500	2.4	1.29	Hydrogen	Faint ring
—	3	1.1	Asteroid belt	—	—	—	—	—
—	4	1.7	(Empty orbit)	—	—	—	—	—
Crillie	5	2.9	Gas giant	57,000	0.9	1.17	Hydrogen-Helium	Faint ring
Romice	6	5.3	Gas giant	48,500	2.3	2.55	Hydrogen-Methane	—
—	7	10.1	(Empty orbit)	—	—	—	—	—
Quai	8	19.7	Gas giant	62,000	1.5	2.13	Hydrogen	—
Frutigen	9	38.9	Gas giant	93,000	1.7	3.62	Hydrogen	Spectacular ring

Hamish (Korinna Ia)

Hamish, the sister world of Hali, was colonized far earlier, since its conditions are fairly Earthlike. Primitive life existed before Hamish was colonized, and the colonists have terraformed the planet further simply by introducing hardy plants and animals from other worlds. The only problem with the local life is a large variety of shelled creatures, somewhat like snails, but secreting a highly toxic compound (see below). These "stingsnails" are important enough in the Hamish ecology that they can't just be exterminated.

Hamish is a considerably denser world than its companion Hali, and has a molten core and a thicker atmosphere, making it far more liveable. Hamish has sizeable deposits of radioactives and heavy metals, complementing the light-metal and organic deposits on Hali; between the two planets, almost any mineral resource is available. As a result, the system is a wealthy one.

Interestingly, the two worlds have the same gravity: .85 G.

Interplanetary Politics

There are political stresses between the sister planets. Wages on Hali are higher . . . they have to be. So immigrants appear constantly, looking for work in the mines. But as soon as they get work, they join the natives in demanding safer and more comfortable working conditions. The political system of Hali/Hamish is very free, so the workers have a legal right to demonstrate . . . but the voters on Hamish don't want to spend huge quantities of tax money to make the underground environments of Hali more comfortable. After all, they say, nobody has to live there!

Hamish is no garden world, but it's fairly comfortable. The biggest problem with Hamish, other than the stingsnails, is the huge tides created by its companion; towns and cities are sited well away from the small seas. Earthquakes and vulcanism are also common in some areas of the planet, and no place is entirely free from small quakes.

Stingsnails

The Hamish stingsnails make up a large group of mollusc-like creatures found throughout the wetter areas of Hamish. They range from tiny to larger than a human head. All are poisonous (blood agents); the severity of the poison ranges from unpleasant itch to quick death. Most snails sting by expelling a single "fang" into the victim; the average species can penetrate clothing of DR 2 or less, but big snails are stronger. A few species can shoot their stings for several yards. These flying stings can penetrate only DR 1 clothing, but they're especially deadly. As a result, outside work in infested areas (especially the tidal basins) is done in body armor, or using sealed vehicles. In particular, the extraction plants that "mine" minerals from the sea depend on remote-controlled grabs and lifters.

Stingsnail

ST: 1-3	Speed/Dodge: <1	Size: <1
DX: 12	PD/DR: 2/1	Weight: up to 2 lbs.
IQ: 2	Damage: *	Origin: SF
HT: 14/3	Reach: C	Habitat: any wet area

*Effects of a typical stingsnail venom are as follows: Make

a HT-6 roll when injected. A failed roll means the venom does its damage: from 1 hit to 2 dice or more, depending on species. A critical failure means death. Anyone taking damage is nauseated and dizzy — -3 to all attribute checks and skill rolls for 1-6 hours. If the HT-6 roll is made, no damage is taken, but the victim still feels sick for 3-18 minutes; -3 to all attribute checks and skill rolls, as above. (This is a Type F venom from the *Bestiary*.)

Most stingsnails are hunters, scavengers, or both. Almost all species will eat dead meat. Many species will use their venom to kill large creatures, which they then cover in their hundreds and eat as the victim rots away. They have no sight, but keen senses of hearing (to locate prey) and smell (to find decaying meat to eat).

Immunization against stingsnail poison is available, but it's expensive. A general immunization, giving +3 to any HT rolls made to withstand the venom, costs \$10,000 per person. Specific immunizations, giving complete immunity to individual types of poison, are also available, usually for \$5,000 each. But there are hundreds, if not thousands, of types of snail. The specific immunization is usually only worthwhile for those working in an area where one deadly type is very common.



Adventures on Hamish

The Collectors. The PCs are approached by a woman who frankly admits that she's just an intermediary. Her boss (she

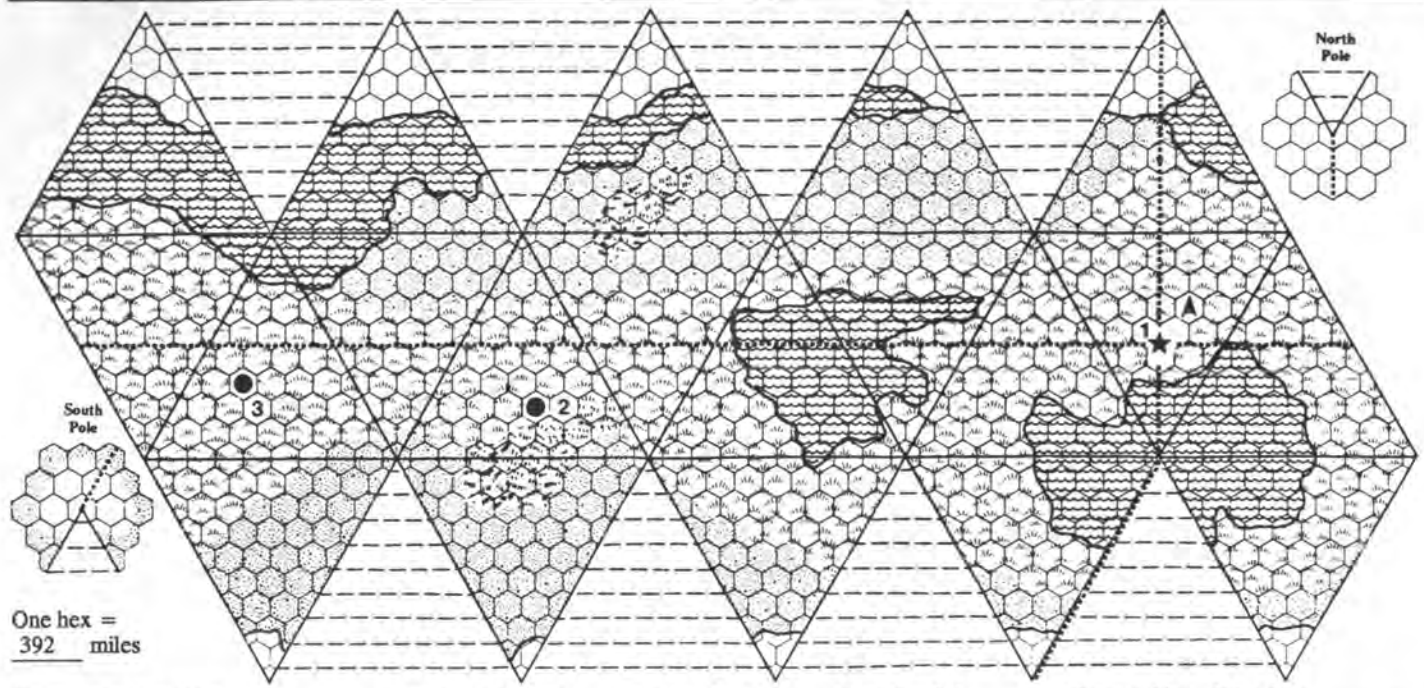
says) is offworld, and needs a little job done on Hamish. There's a certain especially deadly variety of stingsnail, called Striped Death by the natives. Its shell is a near-perfect half-sphere, green with irregular gold stripes, about the size of a large man's clenched fist. It is found only in the tidal areas, scoured every 16 or 17 hours by Hamish's oceans. The Boss would like a half-dozen Striped Death, within two weeks. Alive. He'll pay \$50,000 for the lot.

The intermediary won't answer questions about why the Boss wants the molluscs, but he wants the mission kept secret, so it's probably unsavory. It might be as simple as an assassination. Or maybe the venom can be used as a drug.

This adventure assumes that the PCs are on the wrong side of the law, or have highly flexible morals. If your PCs are the law-abiding type, they won't accept the offer . . . but perhaps they will try to break up the whole affair, which can be just as interesting.

Remote Control. The PCs are visiting a sea-mining plant . . . a large seashore installation, operated mostly by remote control vehicles, due to the stingsnail hazard. A robot grab runs amuck! Before it is controlled, it tears open a sealed building, exposing the occupants (maybe PCs, maybe innocent NPCs) to the incoming tide . . . which will cover the buildings 20 feet deep in less than an hour. There aren't enough sealed vehicles on hand to get everybody out, and the seashore is infested with target-shooting stingsnails.

PLANETARY RECORD: Hamish (Korinna Ia)



Planet type Earthlike Diameter 5,600 mi. Gravity .85 G Density 6.6 Composition High-Iron
 Axial Tilt 6° Seasonal Variation None Length of Day 33 hours Length of Year 89 days/ 122 Earth days
 Atmosphere: Pressure 1.12 (Standard) Type and Composition Nitrogen 75%, Oxygen 23%, Others 2%
 Climate Cool Temperatures at 30° latitude: Low 47° Average 68° High 89°
 Surface Water 21% Humidity 43% Primary Terrain Plains and deserts, with some hills
 Mineral Resources: Gems/Crystals Ample Rare Minerals Plentiful Radioactives Ext. Plentiful
 Heavy Metals Ext. Plentiful Industrial Metals Ample Light Metals Scarce Organics Scarce
 Moons None

Biosphere: Dominant life form Shelled crawlers, including "stingsnails" — see text
 Other significant life forms Algae; swimming amphibians; offworld plants and animals

Civilization: Population(s) 120 million (PR 8) Tech Level(s) 10 Control Rating 2

Society Representative democracy

Starports Class V at Weiss

Installations Several installations of the Hali/Hamish Terraforming Research Institute

Economic/Production Wide variety of agricultural and manufactured goods, with surplus for export;

Exports radioactives and heavy metals, but must import light metals from Hali

Other notes: Map key: 1. Weiss (capital) 2. Astley 3. Glasen

System Information:

Star Name Korinna Type K4 V Location Old Frontiers 5/3/-8

Biozone 0.5-0.6 Inner Limit 0 Number of Planets 7

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Hali	1	.5	Rockball	11,600	3.2	.85	Polluted Oxygen-Nitrogen	Hali and Hamish are
Hamish	1a	.5	Earthlike	5,600	6.6	.85	Oxygen-Nitrogen	double world system
Dennbye	2	.8	Gas giant	23,500	2.4	1.29	Hydrogen	Faint ring
—	3	1.1	Asteroid belt	—	—	—	—	—
—	4	1.7	(Empty orbit)	—	—	—	—	—
Crillie	5	2.9	Gas giant	57,000	0.9	1.17	Hydrogen-Helium	Faint ring
Romice	6	5.3	Gas giant	48,500	2.3	2.55	Hydrogen-Methane	—
—	7	10.1	(Empty orbit)	—	—	—	—	—
Quai	8	19.7	Gas giant	62,000	1.5	2.13	Hydrogen	—
Frutigen	9	38.9	Gas giant	93,000	1.7	3.62	Hydrogen	Spectacular ring

Lorn (Daleth II)

Once a thriving planet, Lorn was devastated by a war of rebellion some fifty years ago. Many people were killed; the Lorn economy was wrecked, and society crumbled. A further "population implosion" followed. Though the Lornese world government is now functioning once again, much of the planet remain hostile and uncontrolled, and many areas are now empty of human life.

The world is basically a good one; it is slightly warmer than Earth-normal, with no icecaps. Its seas are small; three are salt-water, and two are fresh water. Most of its terrain is rolling plains, with a belt of jungle around most of the equator and large swamps bordering the equatorial coastlines.

A worldwide reclamation effort, directed at pacifying (or wiping out) survivalist bands and rebuilding the wrecked cities, is now under way on Lorn. Although full-scale relief efforts across interstellar distances are impossible, Lorn's neighbors are giving what help they can. The Lornese are also accepting homesteaders to repopulate the abandoned territories. As a result, Lorn's one remaining active starport is a busy place.

But the human survivalists are nowhere near the worst problem Lorn faces. In fact, some "hostile" parts of Lorn are no longer populated by humans at all. They have been wiped out by a plague of voracious, vicious creatures called creeps.

to demoralize an enemy population. Thousands were dropped on Lorn; they quickly multiplied to millions. Like most bio-weapons, the creeps had been designed with a weakness. In this particular case, a virus had been tailored to wipe them out when they had done their job. But the virus didn't work; the creeps were on Lorn to stay. In fact, the creeps have full-scale panimmunity; so far, anything that can kill a creep is a worse menace than the creep itself.

Creeps are skulking omnivores . . . large, near-intelligent ratlike creatures whose forepaws are very human hands. Their gray-brown, hairless hide is slick and water-repellent. They have a pathological hatred of human beings, and enjoy manflesh. They just *love* children.

Creep

ST: 4-6	Speed/Dodge: 12/6	Size: 1
DX: 12	PD/DR: 1/1	Wt: 40-60 lbs.
IQ: 6	Damage: 1 cut	Origin: SF
HT: 15/8	Reach: C	Habitat: any land area

Creeps are rarely found just one at a time; they are usually seen by the dozens. They are cowardly, and will avoid a man with a weapon, melting away into tunnels. Deserted Lornese cities are now honeycombed with their burrows — one reason the cities stay deserted. The swamplands are also heavily infested; creeps can live anywhere than man can, but seem to prefer warm weather.

There are occasional reports, not yet confirmed, of tool-using creeps.

The Lornese government offers a \$5 bounty for creep tails, and takes great precautions at the starport to keep creeps from getting offworld and infesting other planets.

Adventures on Lorn

Let's Be Friends. Along with their aid, both Bannar and Drayhoah have also sent missionaries to Lorn to spread their respective Words. The Bannarites are doing much better, since their message of temporal wealth fits in with the Lornese desire to rebuild their world. As a result, the Drayhoans have turned their attention to the survivalist bands, arming them for guerrilla warfare against the rebuilders. The PCs may be on anti-guerrilla duty, or they might be a news team, hoping that their press ID will keep either side from shooting them.

Escort Duty. The Lornese city of Porect, once a continental capital, has been totally wrecked by looters and survivalists and is far from now-civilized areas. The PCs are hired as escorts and/or researchers, as part of a team which is attempting to recover the art treasures and rare books of the Museum of Porect. A scout team last year reported that the Museum was sealed up — apparently the last act of the curator and staff — and that its contents might well be intact. But, to be safe, a recovery team operating in Porect would need a company of mercenaries as a security squad. Unfortunately, that's not in the budget . . .

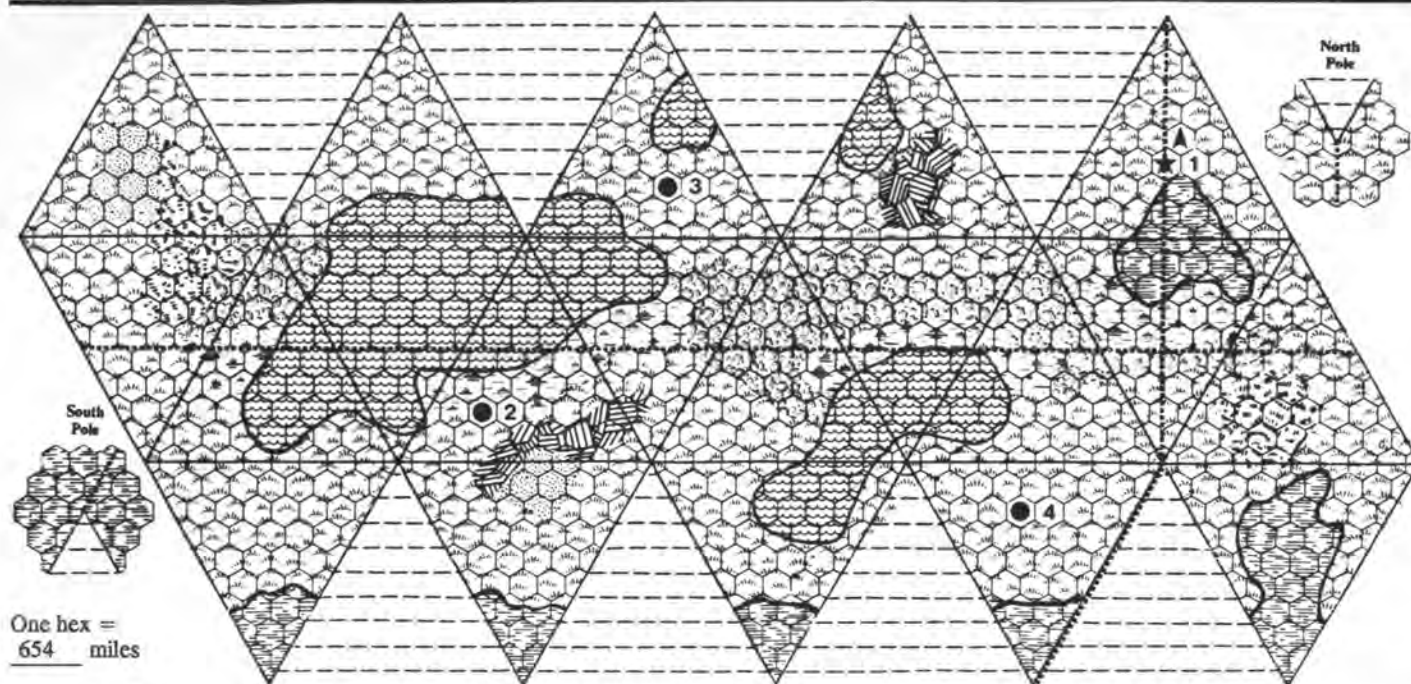
Stowaways. A day outbound from Lorn, the PCs find that their ship is infested with creeps. The creeps are cowardly, but vicious, and not quite smart enough to realize that if they kill all the humans, the ship will never land. But the PCs will have to deal with their uninvited visitors before landing. The obvious solution is to let the air out of the ship. Too bad the creeps have chewed holes in all the vac suits!



The Creeps

One of the most devastating parts of the original attack on Lorn was the ravenous Organism CRE-3B, or "creep." This creature was specifically bred as a biological weapon, intended

PLANETARY RECORD: Lorn (Daleth II)



Planet type Earthlike Diameter 9,350 mi. Gravity 1.18 G Density 5.5 Composition Medium-Iron
 Axial Tilt 3° Seasonal Variation None Length of Day 28 hours Length of Year 113 days/ 133 Earth days
 Atmosphere: Pressure 1.1 (Standard) Type and Composition Nitrogen 76%, Oxygen 23%, others 1%
 Climate Warm Temperatures at 30° latitude: Low 73° Average 94° High 113°
 Surface Water 22% Humidity 43% Primary Terrain Plains
 Mineral Resources: Gems/Crystals Ample Rare Minerals Scarce Radioactives Scarce
 Heavy Metals Ample Industrial Metals Plentiful Light Metals Ample Organics Ample
 Moons 3 moonlets — Weld, Yaggi, and Pluro

Biosphere: Dominant life form Earthlike ecology with avian and mammalian species

Other significant life forms Creeps — dangerous lifeform invented as biological weapon, now found throughout Lorn

Civilization: Population(s) 530 million (PR 8)

Tech Level(s) 10 Control Rating 4*

Society Representative democracy

Starports Class IV at Broneff

Installations Several rebel survivalist bases; Colonial orientation facilities; Navy base in geosynch orbit over Broneff

Economic/Production Exports some industrial equipment; uses land grants to recruit new colonists from offworld, to repopulate Lorn

Other notes: Map key: 1. Broneff (capital) 2. Porect (deserted) 3. Harmon 4. New Jaffa

* Weapon CR 2, due to creep menace

System Information:

Star Name Daleth Type G0 VI Location Old Frontiers 3/9/9
 Biozone 0.5-0.8 Inner Limit 0 Number of Planets 4

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Fargel	1	.2	Rockball	6,900	6.8	1.08	Trace CO ₂ -Nitrogen	Deserted mining colony
Lorn	2	.55	Terrestrial/Earthlike	9,350	5.5	1.18	Oxygen-Nitrogen	Detailed above
—	3	.9	Asteroid belt	—	—	—	—	—
Tintor	4	1.6	Gas giant	58,700	1.9	2.55	Hydrogen	Faint ring
Goudon	5	3.0	Iceball	4,800	4.5	.49	None	Probably captured

Nautilus (Gestae I)

Nautilus is a water world with a harsh climate and few areas of dry land. Its fast rotation and its extreme axial tilt make the atmosphere of Nautilus highly unstable, given to violent storms and winds of extremely high velocities. A few small, ice-covered islands and the polar caps are its only land areas. This was no problem to the original colonists, most of whom were from Hawaii-cha and other water worlds; they were looking for a planet with rich sea life, and didn't care whether there was any land! Thus, Nautilus' civilization is an entirely submarine one.



Beneath the troubled waves live the people of Nautilus, in domed cities, towns and individual homes. Transportation between these habitats is via submarine vessels, some of which also have space capability (see below). So comfortable is the life in the larger domes that many of the planet's citizens never learn to swim! They're just city-dwellers; that the city is thousands of feet underwater is unimportant. Nautilus domes keep a standard 24-hour Earth day, ignoring the short day and year.

Even one of the world's two small starports is mostly underwater — an impressive engineering feat. The second is an orbital station. Most interstellar traffic to Nautilus uses Highport, as only the most skilled pilots are able to navigate the planet's atmosphere to the "ground" starport, Flurry (-2 to Piloting rolls).

Despite its harsh weather, Nautilus' seas are full of life. Nautilus exports large quantities of luxury seafood, including "fish," crustaceans, and the fruits of several large kelp-like plants. Some smaller marine plants have pharmaceutical value. Nautilus exports a few minerals, notably radium (refined from rich ores found in only one site on the planet — #4, a restricted area) and tantalum (extracted from the sea water). Many other metals are extracted or mined in quantities enough for local use. Nautilus has a thriving economy and a growing population.

The Summersun Mercenary Co-op (p. 54) has leased a sizeable area of Nautilus' seabed for use as an underwater training camp. The merc base has its own private starport as well, though this is not open to general traffic. The base is well-protected, and unauthorized visitors are discouraged.

Also of note on Nautilus is a research station where various techniques (both genetic and surgical) are being tested in hopes of producing a truly water-living variety of mankind. Not all the people of Nautilus support this effort; many of them feel that their underwater domes are the best and most natural way to live, and that water-breathing "humans" would be an abomination. They point to the Deepies of Sinbad (p. 52) as an example of what might happen if aquatic humans were created and decided to take the planet for themselves. As a result, the Aquatic Studies Facility is politically controversial.

Nemo Class Triphibian Shuttle

The Nemo class shuttle is designed for use on and around Nautilus. It can travel from orbit down to sea level, and can cruise 3,000 feet below the ocean at up to 100 miles per hour. As a passenger shuttle, it ferries 135 people between orbit and the underwater domes; its cargo bay can handle 296 tons.

To operate effectively underwater, a Nemo has some special design features. It has total compartmentalization. Furthermore, it is braced to withstand 35 Gs, far more than its drive will ever produce — the hull can handle pressure of up to 1,500 standard atmospheres. Its streamlined hull has special control surfaces for underwater use. Most importantly, the ship has a large ballast tank: When the tank is filled with air, the ship floats, but when the 50-cy tank is filled with water the ship becomes heavier than the surrounding ocean and sinks. To carry it into orbit, a Nemo has thrusters, providing .04 G of acceleration. The thrusters are powered by a TL10 fusion plant. A Nemo is very easy to track when underwater; its thrusters constantly flash water to steam, sending up a trail of bubbles and producing a distinctive hiss.

The ship has a crew of five (two pilots, an engineer and two stewards) and can carry 135 seated passengers. The lifesystem will support a full complement for a single day, with a 10% safety margin; the safety margin can also be used to support the crew on the empty return trip. The ballast tanks act as an additional backup, since when empty they are filled with air. The shuttle has artificial gravity throughout the hull.

A Nemo carries 296.2 tons of cargo. There is no "light mass" — when carrying less than its full complement of passengers and cargo, lead ballast (11 tons per cy) keeps the mass constant. (Without cargo or ballast, the ship would have to maintain constant thrust to stay underwater!)

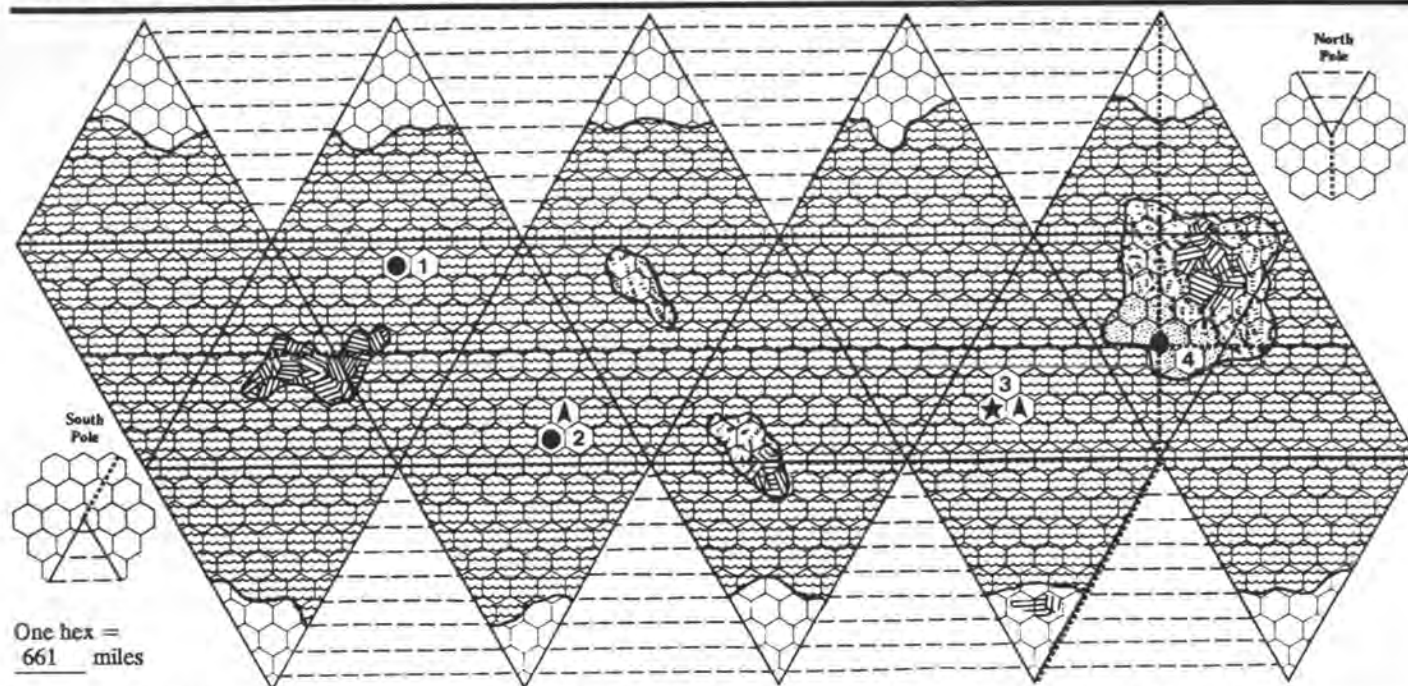
An oval wing 20 yards wide, 8 long and 3 thick, a Nemo masses 475 tons loaded with dry ballast tanks. If operating strictly from the surface to orbit, it can be stripped down to 169 tons, allowing .11 G acceleration. A Nemo costs \$3,274,500.

Adventures on Nautilus

Infiltration. The PCs are hired to investigate rumors that the Aquatic Studies Facility has already created water-breathing humans, and is secretly creating a colony of these "monsters." Possible complication: The ASF might really be just as depraved as its worst critics think; in this case, it is indeed trying to create water-breathing thugs in an attempt to take over the planet!

Under Pressure. Two small dome-towns have been destroyed recently — broken and crushed by the ocean. Sabotage was suspected. Now the government has received a warning that the destruction will continue until certain political demands are met. Is this real terrorism, or just someone taking advantage of a couple of unrelated accidents? Possibly the PCs are drawn into the investigation; possibly, as offworlders who visited one of the domes hours before it collapsed, they are suspects.

PLANETARY RECORD: Nautilus (Gestae I)



Planet type Earthlike Diameter 9,450 mi. Gravity .76 G Density 3.5 Composition Low-Iron
 Axial Tilt 85° Seasonal Variation None* Length of Day 6.2 hours Length of Year 20 days/ 5 Earth days
 Atmosphere: Pressure 1.1 (Standard) Type and Composition Nitrogen 80%, Oxygen 14%, CO₂ 3%, Argon 2%, others 3%
 Climate Cool Temperatures at 30° latitude: Low 23° Average 60° High 105°
 Surface Water 87% Humidity 91% Primary Terrain Ocean (mountains on islands)
 Mineral Resources: Gems/Crystals Absent Rare Minerals Ample Radioactives Ample
 Heavy Metals Scarce Industrial Metals Scarce Light Metals Scarce Organics Ample
 Moons 1 small moon — Arronax

Biosphere: Dominant life form Advanced "fish" and oceanic vegetation

Other significant life forms Abundant invertebrate sealife, from microscopic plankton to huge shellfish

Civilization: Population(s) 1.5 billion (PR 9) Tech Level(s) 10 Control Rating 4**

Society Representative democracy

Starports Class IV at Flurry, Akaraye and Highport (orbital station)

Installations Several oceanic research institutes, including the controversial Aquatic Studies Facility; Patrol base on moon (PR 3)

Economic/Production Exports seafood and other ocean products

Other notes: Map key: 1. Bourne Dome mining center 2. Akaraye (Summersun Mercenary Co-Op) 3. Flurry (capital) 4. Radium deposit

* With a 20-day year, Nautilus' "seasons" are non-existent; the extreme axial tilt makes them more like long days

** Weapons that might puncture domes are strictly prohibited; death penalty for using any such weapon

System Information:

Star Name Gestae Type M3 VI Location Old Frontiers 13/-3/-8

Biozone 0.1-0.1 Inner Limit 0 Number of Planets 4

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Nautilus	1	.1	Earthlike	9,450	3.5	.76	Oxygen-Nitrogen	Detailed above
Beckan	2	.45	Gas giant	51,000	2.1	2.45	Hydrogen-Methane	Faint rings
Basco	3	.8	Gas giant	48,000	1.7	1.87	Hydrogen-Methane	Faint rings
—	4	1.5	(Empty orbit)	—	—	—	—	—
Leviathan	5	2.9	Gas giant	135,000	1.9	5.87	Hydrogen	2 spectacular rings

Pleroo (Pneuma/Hagion II)

The Pneuma/Hagion system is a binary with a main sequence G star, Pneuma, as its primary and a red dwarf, Hagion, circling it at 10 AUs. Only two worlds occupy the system, both inside Hagion's orbit. These are Pletho, a huge gas giant named for the Greek expression meaning "filled to overflowing," and Pleroo (pronounced "play-roh-oh"), Greek for "filled to capacity." Pleroo has two moons; the rest of the system consists of miscellaneous space debris.

Pleroo is aptly named, as it is a world filled with life. It is a pastoral world, given over entirely to agriculture, often called the "Breadbasket of the Old Frontiers." The richness of its soil and the extra-long growing seasons and daylight periods that result from the system's second sun make for spectacular crop yields.

Much of the relatively small population is engaged in agriculture, and immigration is limited primarily to those of similar interests. The planetary government strictly regulates mining and manufacturing; although the planet apparently has rich mineral resources, all but the rarest are left unexploited. Though this infuriates some elements of Pleroo society, the Agriculturalist Party retains a clear majority in Parliament. Other than the spaceports necessary to ship Pleroo's bounty off-world (and import the manufactured goods the planet can't and won't make for itself), the planet seems almost undeveloped from space; its nightside shows few city lights. But by day, an orbiting ship can see that most of the world is ordered and cultivated.

This carries over into the planet's social life. The people of Pleroo, like their world, are ordered and cultivated. Crime is very rare, and art and artists are highly appreciated. The folk of Pleroo may be farmers, but they are *gentleman* farmers, and they feel that their ties with the soil enable them to better understand the finer things in life.

On the other hand, the six starport cities of Pleroo, especially the capital, Cornucopia, are brawling and decadent. But even there, the folk of Pleroo will only tolerate so much. Law enforcement is low-key yet efficient, so in comparison with startowns

elsewhere, Pleroo's ports aren't especially dangerous. A careless visitor isn't likely to wake up dead — just drunken and broke. On Pleroo, the choice of entertainment is simple: a quiet evening at the theater, ballet or symphony in your local small city, or a trip to the starport to raise Cain.

Pleroo is also the site of the Escott Institute, the most prestigious center of learning and scientific studies in the Old Frontiers. Originally an economic institute, the school gradually branched out into other areas, particularly the various sciences.

Today, the Institute's main focus is on xenology and planetology, studying the various lifeforms and planetary phenomena in the Old Frontiers, as well as on xenoarchaeology — particularly the Precursors. The Institute also has a fine school of criminology, from which a number of Patrol leaders have graduated. The most acclaimed achievement of the Escott Institute in recent years, however, was the final publication of its 14-gigabyte Escott Encyclopedia of Universal Knowledge, believed to be the most extensive source of general knowledge available in the Old Frontiers, outside of the archives of the planet Byte. A copy of the EEUK (pronounced, unfortunately, e-yuk) sells for \$25,000, and gives +4 to any Research roll on anything to do with this sector.

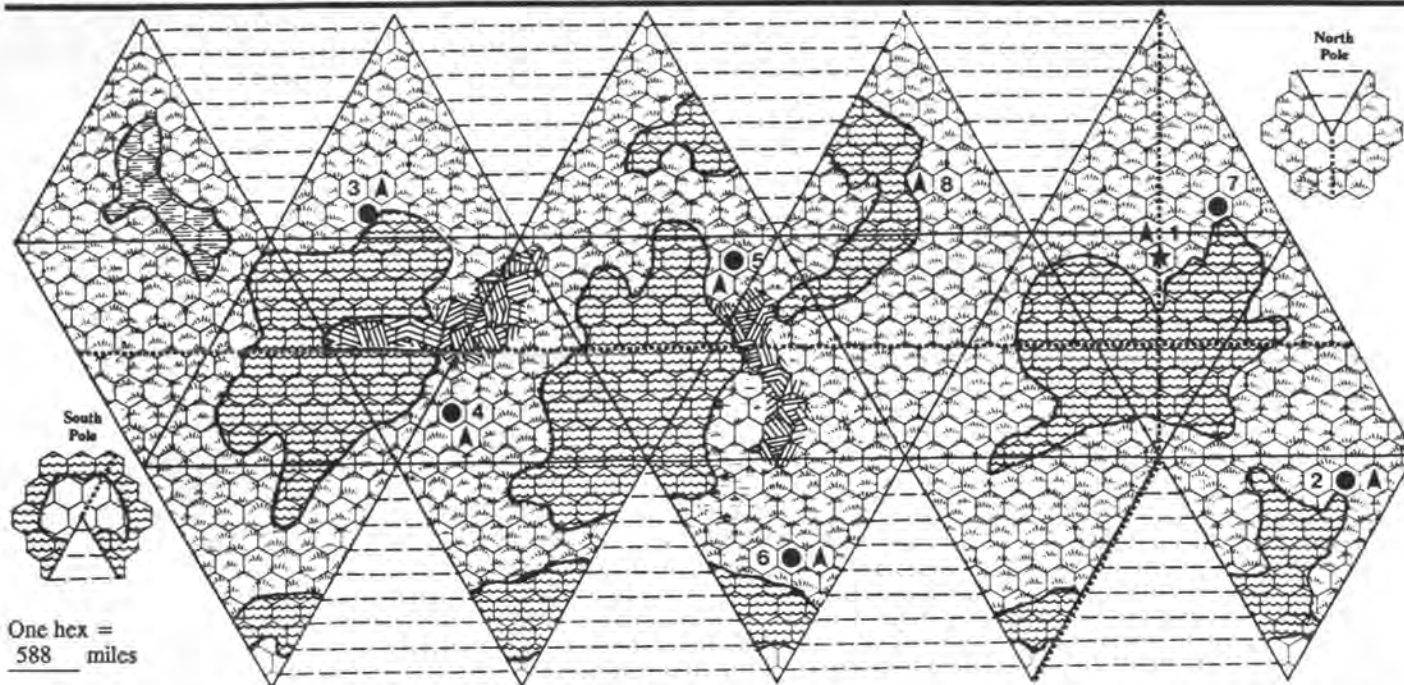
Adventure on Pleroo

Master Disk. On a nearly crime-free world, in the ivy-covered precincts of the Escott Institute, who would have slugged a security robot, kicked down the door of Professor Dzulian's office, and stolen the master disk for Volume 6 of the EEUK? And why? After all, there's nothing on there that isn't on every copy of the now-published encyclopedia . . . is there?

If the PCs are law-enforcement types, they might be consulted by the Pleroo police or University security. If they're criminals, they could be called in for questioning . . . or hear about it and smell profit . . . or it might tie in with their guilty consciences about some past escapade. If the master disk can be recovered, a comparison with the published version might lead to interesting conclusions.



PLANETARY RECORD: Pleroo (Pneuma/Hagion II)



Planet type Earthlike Diameter 8,400 mi. Gravity 1 G Density 5.2 Composition Medium-Iron
 Axial Tilt 11° Seasonal Variation Minor Length of Day 26 hours Length of Year 354 days/ 383 Earth days
 Atmosphere: Pressure 1.04 (Standard) Type and Composition Nitrogen 78%, Oxygen 20%, CO₂ .5%, others 1.5%
 Climate Earth-normal Temperatures at 30° latitude: Low 60° Average 82° High 98°
 Surface Water 32% Humidity 52% Primary Terrain Cultivated plains
 Mineral Resources: Gems/Crystals Plentiful Rare Minerals Ample Radioactives Absent
 Heavy Metals Scarce Industrial Metals Ext. Plentiful Light Metals Plentiful Organics Ext. Plentiful
 Moons 2 small moons — Apollo and Artemis

Biosphere: Dominant life form Six-limbed mammals, many flying
 Other significant life forms Plentiful earthlike ecosystem

Civilization: Population(s) 21.6 million (PR 7) Tech Level(s) 10 Control Rating 3
 Society Athenian democracy — to vote, you must be over 25 and a 10-year resident; political parties are active
 Starports Class V at Cornucopia; 5 other Class III facilities (see map); Class V military port at #8 (no civilian access)
 Installations Headquarters for many corporations; Fosbarr Pharmaceuticals; Patrol base; Escott Institute main campus (see text); Free Trade League office
 Economic/Production Agriculture — almost no mining or manufacturing

Other notes: Map key: 1. Cornucopia (capital) 2. Athens 3. Diogenes 4. Sappho 5. Yates' Folly 6. Tiberias
 7. Escott Institute 8. Military spaceport

System Information:

Star Name Pneuma/Hagion Type G1 V/M2 VI Location Old Frontiers 1/-3/-3
 Biozone 0.9-1.3 (expanded due to Hagion) Inner Limit 0 Number of Planets 2

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
—	1	.3	(Empty orbit)	—	—	—	—	—
Pletho	2	.65	Gas giant	69,000	2.0	3.16	Hydrogen-Methane	No significant moons
Pleroo	3	1.0	Earthlike	8,400	5.2	1.00	Oxygen-Nitrogen	Detailed above

Quentin (Abercrombie III)

Quentin is a barren, wind-swept waste of shifting sand dunes and creviced rock flats, of little use to anyone until recently. Although initial geological surveys showed the planet to be rich in minerals, these were too difficult to reach to make the effort profitable. The planet's quick rotation and relatively dense atmosphere causes a severe Coriolis effect, with high winds whipping the sand into deadly storms.

There are no records of deliberate colonization of Quentin, but nevertheless there is a large human population. Although they are now desert nomads, their language and culture indicates that their ancestors may have come directly from Old Earth, possibly in a STL colony ship sponsored by the 21st-century nation of Russia. Most of the population lives around the four small fresh-water "seas" near the world's equator, but the deserts support enough plant and animal life that tribes wander all over the planet.

Recent discoveries of rich veins of ore in the R'rona Mountain range have put Quentin on the star map once again. The planet is being courted not only by many of the sector's major mining concerns, but by the religious proselytizing efforts of both the Bannarites and the Drayhoans (see pp. 16, 28). Among the nomadic tribes that make up much of the planet's population, the nonmaterialistic approach of the Drayhoans seems to be gaining a small but significant following. Several of the most influential *komisahrs* (clan chiefs) have been converted to the Drayhoah creed.



Pressure-Scorps

The highest form of native life is arthropod. Most of these are insignificant, but some grow to great size. The only dangerous ones among the giants are the "pressure-scorps." These huge scorpion-like creatures kill their prey by puncturing it with their huge tail stingers. The pressure-scorps then suck the bodily fluids out through the stinger, gaining both food and moisture. The armored bodies of the creatures themselves are water- and airtight, to avoid the dessicating effects of Quentin's

superdry atmosphere (which can totally dehydrate an unprotected human in a few hours). A single large pressure-scorp can be more than a match for a whole nomad tribe.

A pressure-scorp will attack anything that moves, except a hatchling pressure-scorp. They have very keen senses (a Vision roll of 14, Hearing of 12). Their claws can attack to the side or front; their stingers can only attack to the front. Victims impaled by a stinger must roll ST-3 to escape.

Hatchling pressure-scorps cling to the carapace of a larger one (presumably a parent) and scavenge from the leftovers. They will not fight each other, but still attack everything else. There is a 1 in 3 chance that any adult pressure-scorp killed will have 1 to 6 little ones, who will attack the party as soon as the big monster is downed.

Adult Pressure-Scorp

ST: 120	Speed/Dodge: 15/7	Size: 12+
DX: 12	PD/DR: 6/15	Weight: 2-6 tons
IQ: 3	Damage: *	Origin: SF
HT: 15/65	Reach: 1-4	Habitat: D

*Claw damage: 4-2 crushing. Tail stinger: 4 dice impaling, plus 1 die per turn after a successful impale, until victim dies and is drained.

Young Pressure-Scorp

ST: 60	Speed/Dodge: 12/6	Size: 6
DX: 13	PD/DR: 5/12	Weight: 1 ton
IQ: 3	Damage: *	Origin: SF
HT: 14/30	Reach: 1, 2	Habitat: D

*Claw damage: 3-2 crushing. Tail stinger: 3 dice impaling, plus (1-2) per turn after a successful impale, until victim dies and is drained.

Hatchling Pressure-Scorp

ST: 20	Speed/Dodge: 8/6	Size: 1
DX: 13	PD/DR: 4/8	Weight: 200 lbs.
IQ: 3	Damage: *	Origin: SF
HT: 12/20	Reach: 1	Habitat: D

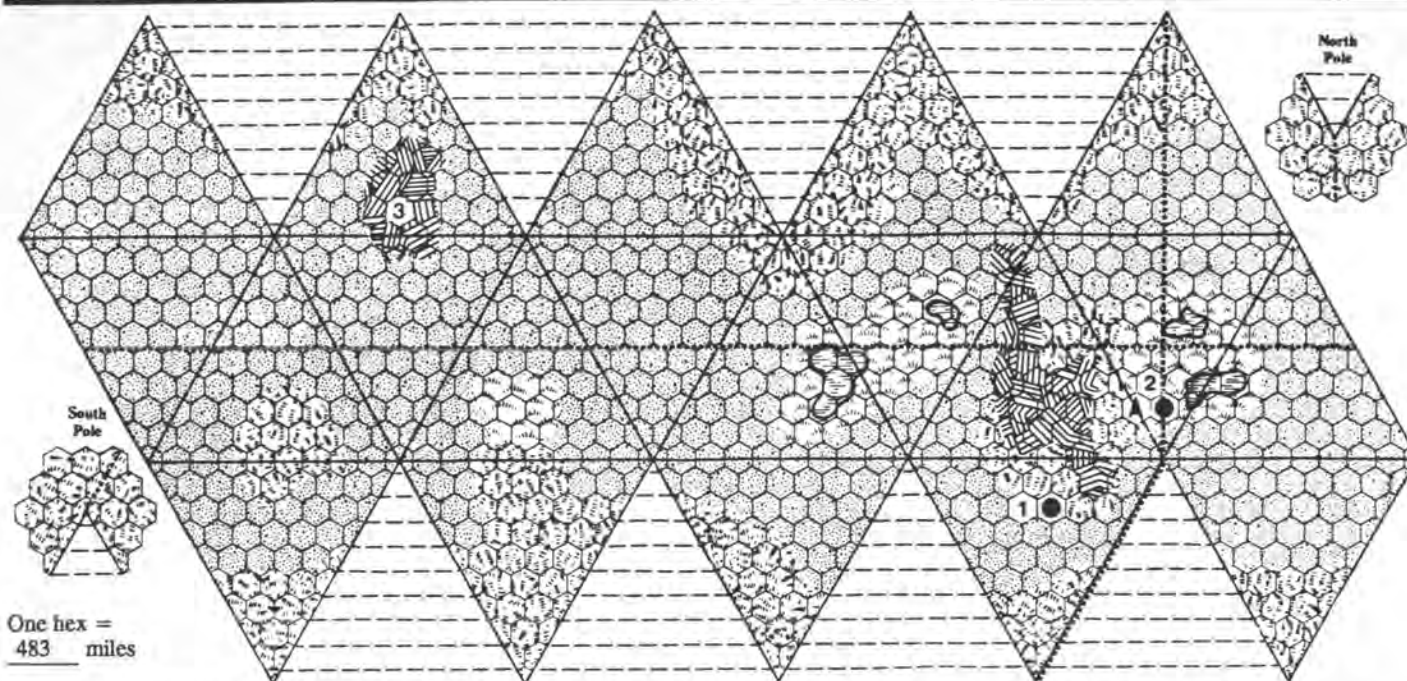
*Claw damage: 1+2 crushing. Tail stinger: 1 die impaling, plus (1-4) per turn after a successful impale, until victim dies and is drained.

Adventures on Quentin

The Prophet. A lucrative mining contract on Quentin has recently been awarded to Kreider Mining, an offworld concern. Operations have already begun in the R'rona Mountains. This has led to unrest among some of the local nomad tribes. A Drayhoan "missionary" has begun to fan this discontent into the flames of rebellion. A guerrilla army of nomads has already begun to gather around the priest, who has made his headquarters in the R'rona Mountains. Quentin may soon be torn by open civil war. The PCs might be hired to find and negotiate with this missionary . . . or to kill him.

Try It And See. The PCs are hired by a mining company to test several new weapons systems against the pressure-scorps. They will be paid \$10,000 for each of several very strange experimental systems that they try out on adult scorps, provided they bring back good videos and scanner readings of the experiment. If they don't bring back this documentation, they will be paid nothing. They will also get \$1,000 for each adult scorp they kill.

PLANETARY RECORD: Quentin (Abercrombie III)



Planet type Earthlike Diameter 6,900 mi. Gravity 1.03 G Density 6.5 Composition High-Iron
 Axial Tilt 37° Seasonal Variation Major Length of Day 6.4 hours Length of Year 3,080 days/ 2.2 Earth years
 Atmosphere: Pressure 1.3 (Dense) Type and Composition Nitrogen 68%, Oxygen 29%, others 3%
 Climate Hot Temperatures at 30° latitude: Low 87° Average 105° High 112°
 Surface Water 0.9% Humidity 5.3% Primary Terrain Desert
 Mineral Resources: Gems/Crystals Plentiful Rare Minerals Plentiful Radioactives Ample
 Heavy Metals Plentiful Industrial Metals Ext. Plentiful Light Metals Ext. Plentiful Organics Scarce
 Moons 2 small moons — Kestrel and Kite

Biosphere: Dominant life form Pressure-scorps and other arthropods
 Other significant life forms Succulent plants

Civilization: Population(s) 375,000 (PR 5) Tech Level(s) 5(10) Control Rating 2

Society Tribal nomads, without world government

Starports Class III at Souven

Installations Bannarite and Drayhoan missions; geologic survey camps

Economic/Production Substantial mineral export anticipated in the near future; imports TL10 equipment (especially agricultural)

Other notes: Map key: 1. Dune City 2. Souven 3. R'rona Mountains Most minerals are relatively inaccessible, requiring offworld technology for mining; natives live at TL5, though TL10 equipment is not difficult to acquire, especially near Souven

System Information:

Star Name Abercrombie Type K4 IV Location Old Frontiers 8/-1/-4
 Biozone 1.0-1.5 Inner Limit 0 Number of Planets 7

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Moore	1	.5	Hot rockball	2,100	3.7	.18	Very thin nitrides	—
Chang	2	.9	Hot rockball	7,350	5.1	.86	Very dense reducing	—
Quentin	3	1.3	Earthlike	6,900	6.5	1.03	Dense Oxygen-Nitrogen	Detailed above
—	4	2.1	Asteroid belt	—	—	—	—	—
Dalley	5	3.7	Gas giant	77,300	2.3	4.07	Hydrogen	24 moons
—	6	6.9	(Empty orbit)	—	—	—	—	—
Fairlawn	7	13.3	Gas giant	35,000	1.7	1.36	Hydrogen-Methane	Faint ring
Bobo	8	51.7	Gas giant	47,500	2.1	2.28	Hydrogen-Helium	Oort belt
Piakowski	9	102.9	Gas giant	93,500	.9	1.93	Hydrogen-Helium	—

Redugun (Torsk I)

This heavily-forested world is very Earthlike except for slightly heavier gravity and very extreme seasons. Its "average" temperature is Earth-normal, but its heat waves are hot and steamy, while it is occasionally cold enough to snow even at the equator. As a result, Redugun furs are luxury items, and one of the world's best-known exports. Many of the mammal-like creatures on Redugun grow extremely large, and the trees of the equatorial regions dwarf Earth's giant sequoias.

The original Redugun colonists adopted a feudal style of government, with themselves on top and subsequent immigrants falling below them on the social scale. Over the centuries since first planetfall, the human population has developed a rigid caste society. Descendants of the original colonists are the feudal "lords" of Redugun, and enjoy the greatest influence and personal freedoms. Highly skilled technicians and scientists rank below the lords, followed by the military and hunters, merchants and, finally, common agricultural laborers and miners.



Thus, Redugun is divided into duchies, counties, and baronies, each with its feudal lord. Local wars are perfectly legal and acceptable under Redugun law, as long as they don't constitute a rebellion against the King or one of his Grand Dukes. And even those would be legal, after the fact, if the rebels won.

But the bottom of the Redugun social ladder is reserved for the world's native race. The Dringels, furry, tailed humanoids, have been virtually enslaved by the human population of the planet. Declared nonintelligent by their discoverers, the Reduguns were captured in droves, then trained as laborers.

Some xenozoologists offplanet have studied the Dringels and claim that they are as intelligent as humans. Redugun scientists ridicule this, pointing out that the Dringels' own "language" contains less than 50 words and that they never learn human tongues at better than a six-year-old level. And the Dringels seem to have no culture of their own; even newly-captured ones gleefully imitate anything they see their human masters do (including human vices like drinking and smoking) and rarely attempt to escape unless brutally treated. This rarely happens; the Reduguns are not cruel, and consider the Dringels a valuable resource.

A "Free-the-Dringels" movement is gaining strength among Redugun's neighbors. It has a little support on Redugun itself, but not much; a few progressive nobles get along without Dringel labor, but they are having trouble competing with their neighbors. Humans have to be paid, and Dringels don't. Worse, a human who is part of the work force isn't available as a soldier, and every local ruler needs troops.

In fact, the Dringels are necessary to the whole planet's economy, at least as it is currently set up. One reason the planet's trade is competitive, even though its tech level is lower than its neighbors', is that slave labor reduces the overhead in the fields and mines!

The Dringels (GM's Information):

The native Reduguns, the Dringels, are on the threshold of intelligence . . . the question of whether they are "slow" sapient or very smart animals is really a moral or ethical one. On the average, they are not nearly as smart as humans, but occasional specimens actually possess human intelligence. There are many Dringels still in the wilds — at least as many, if not more, than those who are "domesticated."

Dringel NPCs might be found, even off Redugun, as servants of traveling nobles. And Dringel PCs are possible. There is no point cost or bonus to be a Dringel if the character goes off-world; a Dringel in an all-Redugun campaign would have a 15-point disadvantage for his social status ("valuable property," but considered unintelligent — -3 reaction from humans).

Dringel characters have +1 to ST and DX, -3 to IQ, the advantages of +2 Alertness, Double-Jointed and Ambidexterity, and the Primitive (TL4) disadvantage. They are 6" shorter than a human of the same ST.

Most Dringels who have been exposed to human society have acquired the Delusion "Everything humans do is wonderful" and have a +3 reaction to humans at all times.

Adventures on Redugun

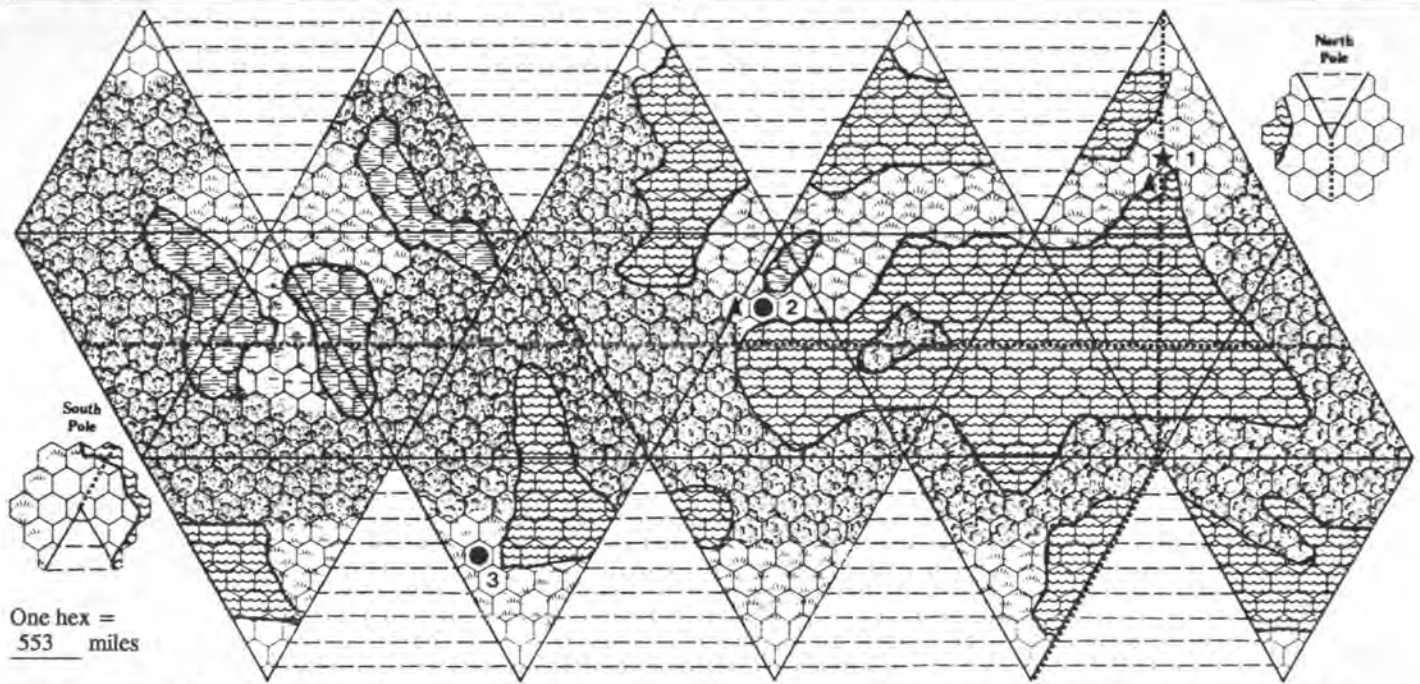
A-Hunting. The PCs are invited to go hunting in one of the wilder portions of the planet. A variety of game is possible . . . most of it with long teeth, sharp claws, and a PD and DR of at least 2 from that thick, valuable fur. And Redugun custom decrees that high-tech weapons be left behind . . . these beasts must be faced with spear, sword and crossbow. Needless to say, the natives are expert with these weapons of honor. They don't really expect offworlders to be comfortable without their ultra-tech sidearms, and will try to make allowances, but PCs who don't make an effort to use their low-tech weapons properly will be looked down upon.

Shut Your Big Mouth. One problem the Free-the-Dringels crusaders must deal with is the Dringels themselves. Most of them are very happy with their lot. And the most intelligent ones, who might become natural leaders or symbols, are the happiest of all, because their owners give them almost-human privileges.

Recently, a reporter for the Redugun planetary news service filmed an interview with a Dringel named Goldoom. Goldoom is smarter than some humans (though he knows better than to flaunt it) and is an overseer for a logging camp near Southkeep. In the interview, Goldoom was openly contemptuous of his own race, whom he described as "children." With his feet on the desk, smoking and drinking, he looked like a cynical little clown, living proof that even the smartest Dringels need to be "taken care of." Goldoom knows he is being used, but he doesn't care; he has as much of a slave mentality as his duller brethren, and was performing to please his master.

At any rate, this skillfully-done interview would hurt the Free-the-Dringel cause badly if it was rebroadcast offworld. The PCs may be hired to steal the original before it can be duplicated. Their employers wouldn't mind, either, if something permanent happened to that clever reporter and to the "traitor to his species" Goldoom.

PLANETARY RECORD: Redugun (Torsk I)



Planet type	Earthlike	Diameter	7,900 mi.	Gravity	.96 G	Density	5.3	Composition	Medium-Iron
Axial Tilt	46°	Seasonal Variation	Earthlike*	Length of Day	47 hours	Length of Year	22	days/	42 Earth days
Atmosphere: Pressure	.98 (Standard)		Type and Composition Nitrogen 77%, Oxygen 20%, others 3%						
Climate	See *, below		Temperatures at 30° latitude: Low		42°	Average		80°	High 119°
Surface Water	32%	Humidity	58%	Primary Terrain Forest					
Mineral Resources: Gems/Crystals	Scarce		Rare Minerals		Scarce		Radioactives		Adequate
Heavy Metals	Plentiful		Industrial Metals		Plentiful		Light Metals Ext. Plentiful		Organics Plentiful
Moons	None								

Biosphere: Dominant life form Large mammal-analogs; Dringels are sentient; some carnivores grow very large
 Other significant life forms Complete ecosystem — trees grow extremely large

Civilization: Population(s) 64.3 million humans (PR 7); 100 million (?) Dringels Tech Level(s) 9 Control Rating 3

Society Feudal with strong hereditary caste divisions. Duelling is common in all castes, but not between castes.

Starports Class III at Castle Stark; small Class III at New Tethys

Installations Free Trade League office; university at Southkeep

Economic/Production Agricultural/mining economy, based on cheap Dringel labor. Exports include steel, copper, lumber, fine furs.

Other notes: Map key: 1. Castle Stark (capital) 2. New Tethys 3. Southkeep

* Short year reduces seasonal variation to Terran proportions, despite major axial tilt

System Information:

Star Name	Torsk	Type	K6 VI	Location	Old Frontiers -2/4/-6
Biozone	0.2-0.3	Inner Limit	0	Number of Planets	8

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Redugun	1	.3	Earthlike	7,900	5.3	.96	Oxygen-Nitrogen	Detailed above
Havant	2	.7	Hostile terrestrial	3,800	4.2	.37	Thin CO ₂ -Nitrogen	Primitive plant life
Rhyl	3	1.1	Gas giant	37,000	2.0	1.69	Hydrogen-Methane	—
Truro	4	1.9	Iceball	2,100	5.1	.25	Trace Nitrogen	—
Torbay	5	3.5	Gas giant	85,000	1.5	2.92	Hydrogen Faint ring	Faint ring
Solihull	6	6.7	Icy rockball	7,750	3.6	.64	None	—
Stoke	7	13.1	Gas giant	39,500	2.4	2.17	Hydrogen	Spectacular ring
Ayr	8	25.9	Gas giant	62,300	.9	1.28	Hydrogen-Helium	Only 3 moons

Roentgen (Irian I) — *Prohibited*

The planet tagged Roentgen by its discoverer was aptly named. Roentgen is a highly radioactive world, though not from natural causes. From orbital and robot surveys of the world, it appears that Roentgen once had a civilization of approximately TL7 that completely destroyed itself in a planetwide thermonuclear war. The blasted ruins of cities can still be observed from orbit. No manned landings have ever been attempted on the planet because of the high levels of radiation that still contaminate the land, seas and even the very air of Roentgen. The climate is also considerably colder than it must have been before the war threw massive amounts of dust into the atmosphere.

From measures of the radiation levels, Roentgen seems to have committed nuclear suicide anywhere from 50 years to a century before the first Survey ships reached it. No sign of living intelligence has ever been detected on Roentgen, nor any animal life larger than insects, several of which robot probes brought back for study. No plant life more advanced than grass and small weeds survives, and many areas of the surface are now entirely desert. Sensor readings of the planet's surface, however, are difficult to obtain due to interference from the high radioactivity.

It is barely possible that intelligent life did survive, perhaps underground or under the seas, though no concrete evidence of this has yet surfaced. On the other hand, recent sensor readings (improving with the slow decrease in radiation levels) and visual sightings have suggested that something may be once again stirring on the surface of Roentgen, though its nature is as yet unknown. The radiation levels have dropped enough since Roentgen's discovery that it may soon be feasible to send manned probes to the planet's surface. In anticipation, both the Survey and the Escott Institute have established orbital research

stations off Roentgen to further study the situation. The Survey base on the moon continues to enforce the prohibited status of Roentgen even while preparations are underway for future landings by scientific teams.

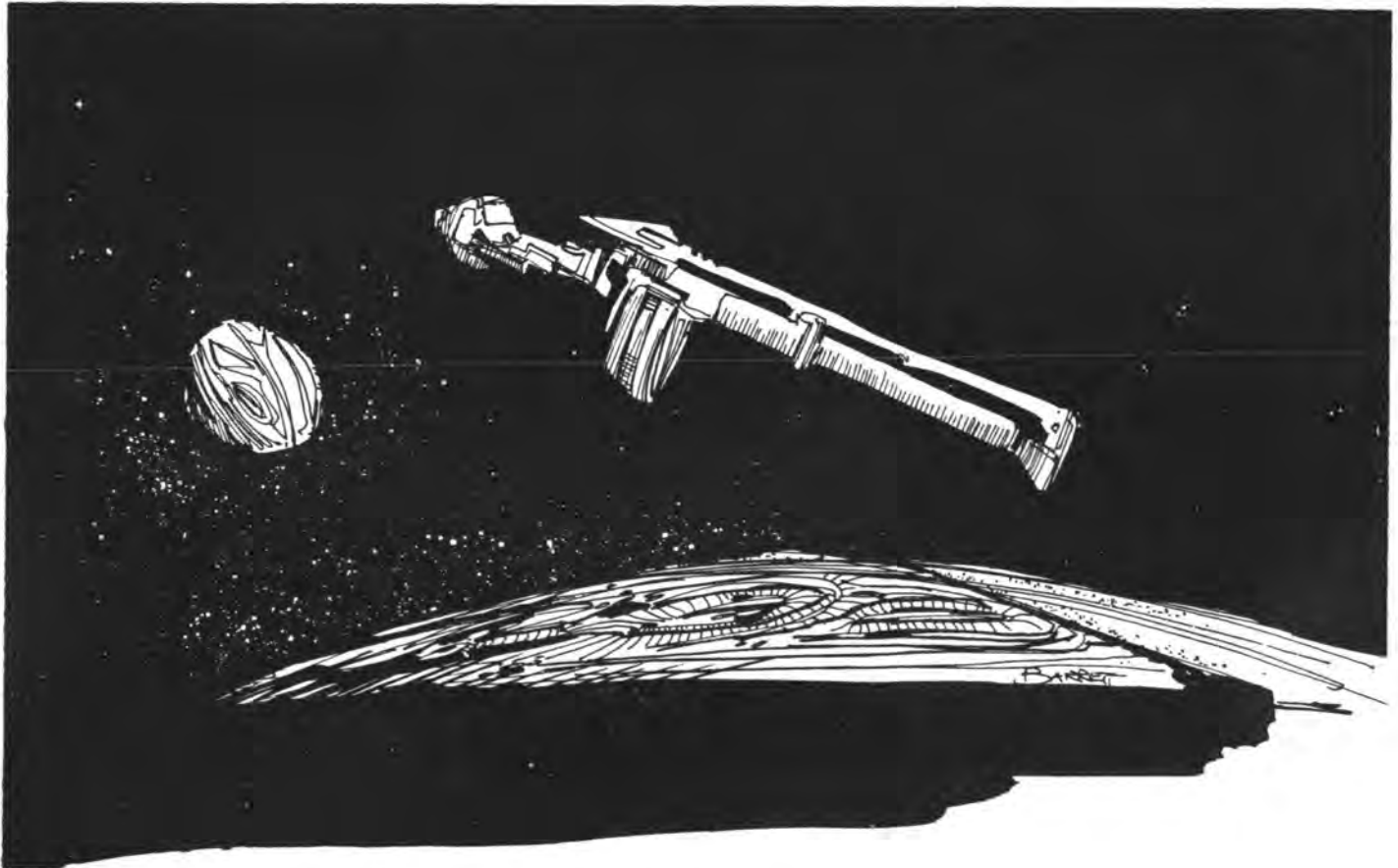
Any landing, of course, will require sealed suits with radioactivity protection. Rural areas of Roentgen will now give a visitor from 10 to 20 rads per hour. The cities literally glow; some heavily-dusted sites would expose an unprotected person to well over 500 rads per hour. Air filters will also be needed against fallout; a suitable filter costs \$40 and lasts a week. After that, it starts admitting some fallout . . .

Adventures on Roentgen

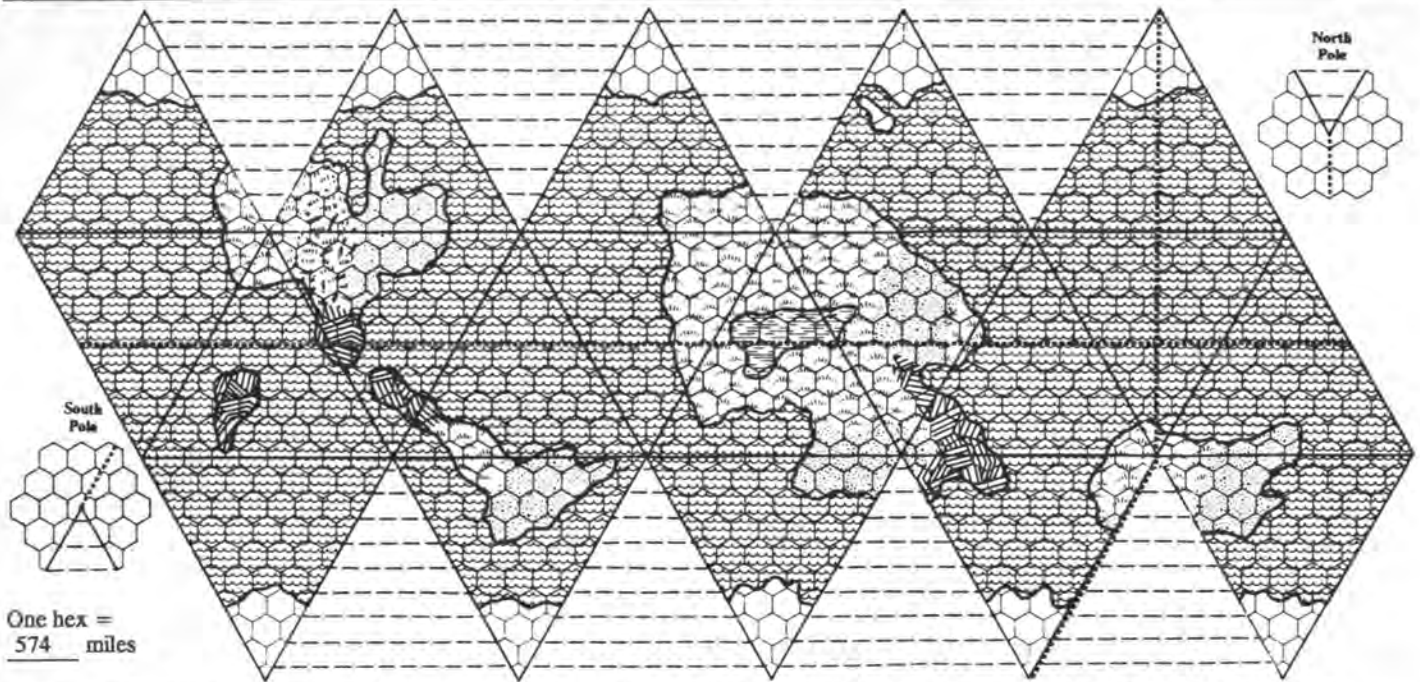
The Looters. Think of the riches! A whole planet, with its art, its artifacts, its technology . . . open for the taking. Though Roentgen's cities are mostly slag, the smaller towns are intact, their inhabitants killed by fallout. As soon as Roentgen is even marginally safe, scientific teams will be crowding to investigate . . . and opportunists will be landing in droves to carry off whatever they can.

The Survivors. It is possible that some Roentgen natives still exist, buried in underground bunkers (perhaps in suspended animation) until radiation levels have diminished enough to make the surface livable again. It is also possible that radiation-resistant mutants might live in the ruined cities or wilds of Roentgen. Explorers may be taken for enemies.

Or *both* sides may retain military capability. They may restart their war as soon as they make it to the surface . . . Or they may join forces against the alien "grave-robbers" when they see their planet being looted.



PLANETARY RECORD: Roentgen (Irian I)



Planet type Earthlike Diameter 8,200 mi. Gravity .86 G Density 4.6 Composition Medium-Iron
 Axial Tilt 21° Seasonal Variation None* Length of Day 18 hours Length of Year 24 days/ 18 Earth days
 Atmosphere: Pressure 1.06 (Normal) Type and Composition Polluted (ash & fallout); Nitrogen 78%, Oxygen 20%, Helium 2%
 Climate Cool Temperatures at 30° latitude: Low 35° Average 54° High 71°
 Surface Water 71% Humidity 46% Primary Terrain Plains; radioactive desert/wasteland
 Mineral Resources: Gems/Crystals Unknown Rare Minerals Unknown Radioactives Apparently Ample
 Heavy Metals Ample or better Industrial Metals Scarce (?) Light Metals Clearly Plentiful Organics Apparently Ample
 Moons 1 medium moon — Ephan; apparently never reached by Roentgen natives

Biosphere: Dominant life form Small mammals; insects

Other significant life forms Vegetation, other than grasses and minute algae, appears extinct

Civilization: Population(s) None known Tech Level(s) Was 7? Control Rating —

Society None

Starports None

Installations None

Economic/Production None

Other notes: Entire planet radioactive!

* With an 18-day year, Roentgen has no seasons

System Information:

Star Name Irian Type M6 V Location Old Frontiers -10/7/14
 Biozone 0.1-0.2 Inner Limit 0 Number of Planets 7

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Roentgen	1	.2	Earthlike	8,200	4.6	.86	Polluted Oxygen-Nitrogen	Detailed above
Alpha	2	.4	Gas giant	42,000	2.3	2.21	Methane-Hydrogen	—
—	3	.6	(Empty orbit)	—	—	—	—	—
Beta	4	1.0	Rockball	6,900	4.8	.76	None	Gallium present
Gamma	5	1.8	Rockball	12,100	4.3	1.19	None	—
—	6	3.4	(Empty orbit)	—	—	—	—	—
—	7	6.6	Asteroid belt	—	—	—	—	—
Quark	8	13.0	Iceball	2,100	4.1	.20	Trace H ₂ O	No landings recorded
Cobalt	9	25.8	Gas giant	20,100	1.6	.74	Hydrogen-Methane	—
Cold Fusion	10	51.4	Iceball	3,200	3.2	.23	Trace CO ₂ -Helium	No landings recorded

Sheba (Ashurbanipal II)

Sheba is the closest thing to a classical monarchy in this part of the galaxy. The original colonists were the royal family of the planet Bohemia and their loyalist followers, deposed by a coup on that world. The loyalists, with their backs to the wall, agreed to leave quietly if they were given a well-stocked colony ship. The rebels, relieved to get off without a fight, agreed, and 34,000 people, most in freeze, set off to found a new kingdom.

Sheba, though harsh, was the best unclaimed world the loyalists were aware of within their ship's range. For its first few years, the colony teetered on the brink of survival. Then the discovery of rich deposits of radioactive ores and industrial metals enabled the new Sheban royal family and followers to prosper and tame parts of the world.

Unfortunately, much of the planet was too rough to exploit effectively. The mountains and plateaus that make up the majority of the planet's surface are infertile, and the air is too thin to breathe without a respirator. The polar caps are large, and much of the equatorial region is covered by ocean. Only in two regions of equatorial valleys have the Shebans been able to live unprotected. They farm in the lowlands and live on the mountainsides; the higher up your residence, the higher on the social ladder you are. The Royal Palace is on the highest peak of New Bohemia.

But as the mineral wealth in these areas have begun to run out, the Shebans have started discussing ways to exploit the rest of their world. A massive survey is taking place, and a network of mountaintop stations and small satellites is being established to coordinate the surveying effort and establish a worldwide navigation grid.

Queen Viktorya is also the subject of considerable gossip around the sector, now that she has accepted a marriage proposal from a "commoner" rumored to be a VIP in the Organization. Her future prince, already elevated by Viktorya to the honorary title of Baron, now makes his residence on Sheba in anticipation of the coming wedding.

Wattiwaddle

Sheba is also known for its highly unusual moon. Dubbed "Wattiwaddle" by the first royal family, after their nickname for an overweight uncle, it is shaped, roughly, like three different-sized spheres squashed together. It tumbles as it orbits, and it is close enough that it rolls across the sky several times each day. Though it appears that it might come crashing into the planet at any moment, Wattiwaddle remains well outside the Roche limit. It will undoubtedly still be orbiting Sheba, after its own fashion, long after man is only a memory on the planet.

Wattiwaddle is known to have considerable deposits of platinum and iridium, but a Royal decree forbids its exploita-

tion. The Royal Sheban Space Force has many times tangled with illegal miners trying to pick up a piece of the little moon.

Adventures on Sheba

His Grace's Private Investigators. The PCs are approached by Duke Ivan, the young uncle of Queen Viktorya. He is extraordinarily upset by the rumors that his Queen's intended, Hannes Pontefract, is a common criminal. "Common," he jests, "is bad enough. No offense!"

He will pay well if the PCs can invade Pontefract's mountaintop home and come away with evidence that will convince the Queen to reconsider. However, the job must be done with total discretion. If his agents are caught, he will have to disavow them. This is why he is willing to recruit spacers. If he used his own liege-men, he could not in honor abandon them. He takes pains to explain this to the PCs!

In point of fact, the Duke himself has (honorable) romantic designs on his niece. He is only a few years older than she is, and marriages between close relatives are accepted — indeed, com-

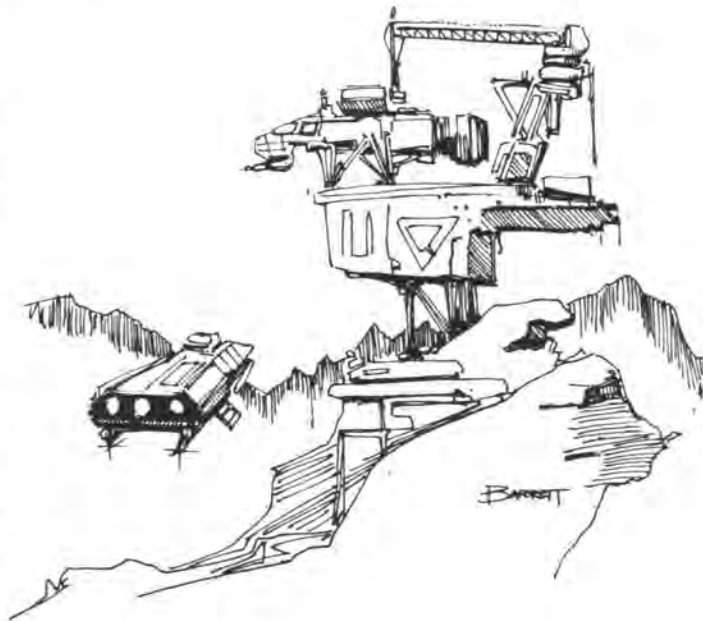
mon — among Sheban royalty. He won't discuss this with the PCs at first, but if they get along well (perhaps only after the initial job is done) he'll admit it.

Possible complications: The Sheban Royal Guard has a contingent in every noble home (the Duke can help with this). If Pontefract is indeed Organization, he will have his own arrangements for security, unknown to the Royal Guardsmen. Pontefract has an alien valet, who may have unexpected abilities. And it's possible that Viktorya knows perfectly well that Pontefract is a criminal, and loves him anyway — or wants to forge a connection with the Organization to

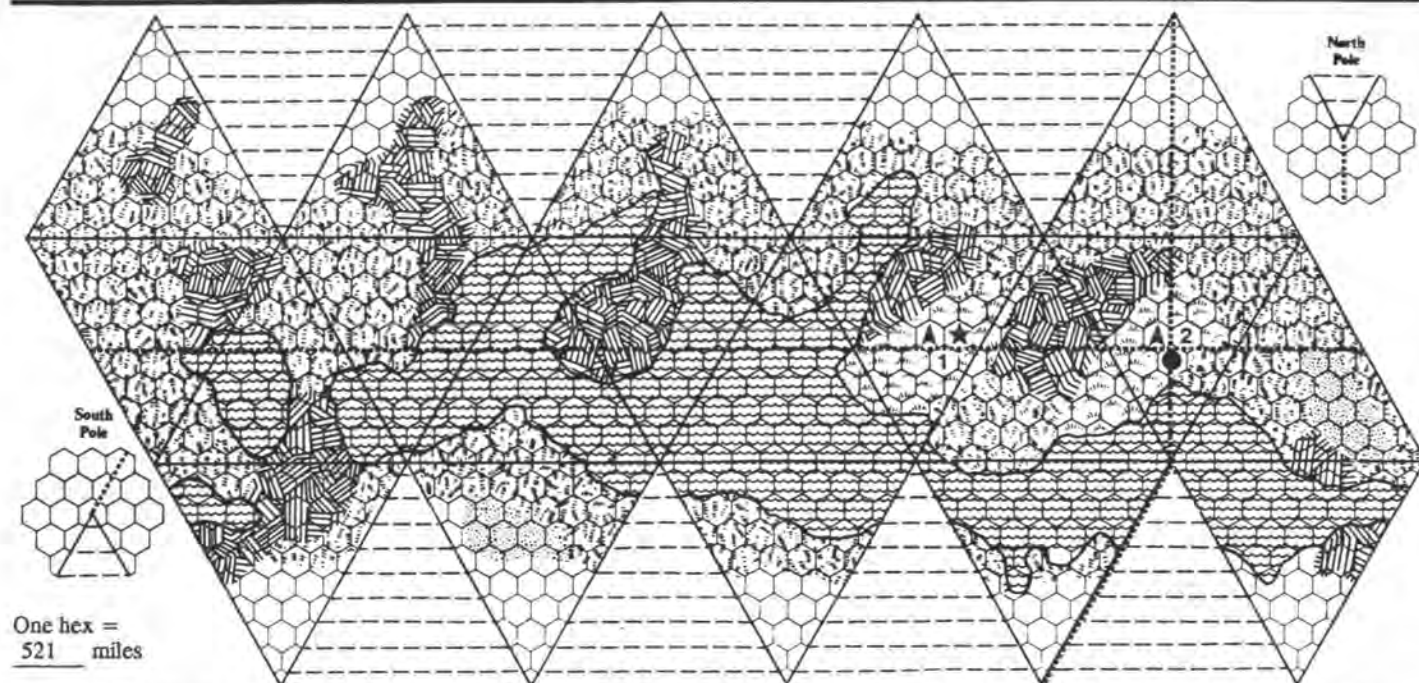
help keep her world safe from other menaces.

The Royal Sheban Survey Corps. The PCs sign up for a tour of duty exploring and exploiting the Sheban wilderness. The lure is not the money (though that is good), nor the attraction of working with excellent equipment (though Sheba is wealthy and buys the best). Rather, it's the fact that successful surveyors have been knighted several times in the past year.

Of course, getting involved in Sheban social climbing is not without its hazards. You do have to swear fealty to Her Majesty when you sign up, and the Shebans take such oaths very seriously . . . Her Majesty's liegemen are expected to stay on the planet for the full length of their term of service, and not to go galivanting off in space again. Note also that the *code duello* is in full force on Sheba, and "blasters at six paces" is a common challenge. Sometimes they duel in armor. Sometimes they choose armor *with no helmet*.



PLANETARY RECORD: Sheba (Ashurbanipal II)



Planet type Earthlike Diameter 7,450 mi. Gravity .97 G Density 5.7 Composition Medium-Iron
 Axial Tilt 10° Seasonal Variation Minor Length of Day 26 hours Length of Year 149 days/ 161 Earth days
 Atmosphere: Pressure 1.0 (Standard) Type and Composition Nitrogen 75%, Oxygen 21%, others 4%
 Climate Cold Temperatures at 30° latitude: Low 11° Average 31° High 51°
 Surface Water 28% Humidity 47% Primary Terrain Mountains
 Mineral Resources: Gems/Crystals Ample Rare Minerals Scarce Radioactives Plentiful
 Heavy Metals Ample Industrial Metals Plentiful Light Metals Ample Organics Scarce
 Moons 1 small moon — Wattiwaddle

Biosphere: Dominant life form Small mammals; insects
 Other significant life forms Earthlike plants in the valleys

Civilization: Population(s) 780,000 (PR 5) Tech Level(s) 10 Control Rating 4

Society Monarchy; complex system of feudal obligations

Starports Class IV at New Bohemia; Class III at Balkis

Installations Survey base; University at Balkis

Economic/Production Exports radioactives and some industrial metals

Other notes: Map key: 1. New Bohemia (capital) 2. Balkis

Areas shown on map as "fields" are deep valleys broken by mountains

System Information:

Star Name Ashurbanipal Type K5 V Location Old Frontiers -5/-13/1
 Biozone 0.5-0.6 Inner Limit 0 Number of Planets 3

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Shadrach	1	.2	Hot rockball	5,500	6.6	.83	None	—
Sheba	2	.6	Earthlike	7,450	5.7	.97	Oxygen-Nitrogen	Detailed above
—	3	1.0	(Empty orbit)	—	—	—	—	—
—	4	1.8	(Empty orbit)	—	—	—	—	—
Nebuchadnezzar	5	3.4	Gas giant	85,950	1.0	1.97	Hydrogen-Methane	3 faint rings

Sinbad (Briareus I)

Sinbad is one of the most recently colonized worlds in the Old Frontiers. It was only successfully colonized some 50 years ago, after two earlier attempts had failed with the complete disappearance of the colonists.

Tales of the first colony's mysterious vanishing led to rumors that the planet was haunted — a theory reinforced when the second colony group also vanished. Finally, however, a larger, better-armed colony established itself on a different continent, and eventually discovered the cause of the earlier disasters — a race of aquatic humanoid that had remained hidden from the sensor scans of the initial planetary surveys, due to a masking effect caused by the heavy mineral content of the oceans.

These "Deepies" had evidently massacred both colonial parties. To this day, there has been no communication with the Deepies, and the race has not been properly studied (see below). On Sinbad, especially near the oceans, the colonists now travel well-armed and in large groups. And even so, colonists are lost.

Because the presence of the Deepies has seriously curtailed the colony's attempts to exploit the mineral and biological resources of Sinbad's oceans — the main reason for the colony's establishment in the first place — many of the colonists favor treating them as animals and exterminating them. This makes for an explosive situation on the planet between pro- and anti-Deepie camps. The Survey Service has established a Research Station on Sinbad to study the Deepies and attempt to establish communications with them.

The planet itself is mostly covered with water, its only dry surfaces being a series of archipelagoes stretching across its equatorial region, one small continent, and small polar ice caps. Its climate resembles that of Earth's south sea islands, with little climatic variation throughout its year.

Sinbad is governed by a loose bureaucracy, whose main branch is the Office of Oceanic Affairs. Its primary function is to further the world's ability — and right — to exploit the planet's resources. So far, this is limited to mining the oil and other organic mineral beds on the ocean floors near the few inhabited island groups, to filtering metals out of the mineral-rich waters and to harvesting seafood and oceanic algae beds in the offshore farms. A few commercially valuable fish and shellfish have been discovered, but hunting them is dangerous.

The Deepies

The Deepies are not at all well-understood; no one even knows what they call themselves. They appear perfectly adapted for submarine life, but the race is clearly capable of short stretches on land. They remain hostile to humanity, and so far, all attempts to communicate with them have been in vain. Captured Deepies refuse to eat and quickly die. Deepies will react at -6 to any non-Deepies.

Deepies have +2 to ST and HT and +1 to DX. They have the racial advantages of Night Vision, Toughness (1 level), and Acute Hearing underwater (+4). They automatically have Swimming skill at DX+3 and Survival (Underwater) at DX+2. They have the disadvantages of Color Blindness and Mute (for the purposes of communicating with other races only). They communicate with one another through ultrasonic tones, inaudible to

humans, as well as through touch and movements (and, some experts believe, limited telepathy).

Deepie weapons include sharp daggers, as well as harpoons and tridents (treat as spears) carved from extremely hard coral-like growth. They also have crude but effective crossbows.

Adventures on Sinbad

Study Team. Starfarers might be drawn to Sinbad as part of a scientific team attempting to study the Deepies, or — perhaps more likely — as a guard or survival expert attached to such a team. The Deepies are not "just animals." Exactly how intelligent they are is up to the GM, but they have exhibited behavior that marks them as at least TL3 and IQ 8. Outside observers who have seen their artifacts say they are as intelligent as humans. Angry Sinbadders insist that they do everything by instinct, and have even accused the visiting scientists of falsifying information, making and planting the crossbows and other "advanced" artifacts, and so on. The radical kill-the-Deepies faction is gaining support among Sinbad bureaucrats.

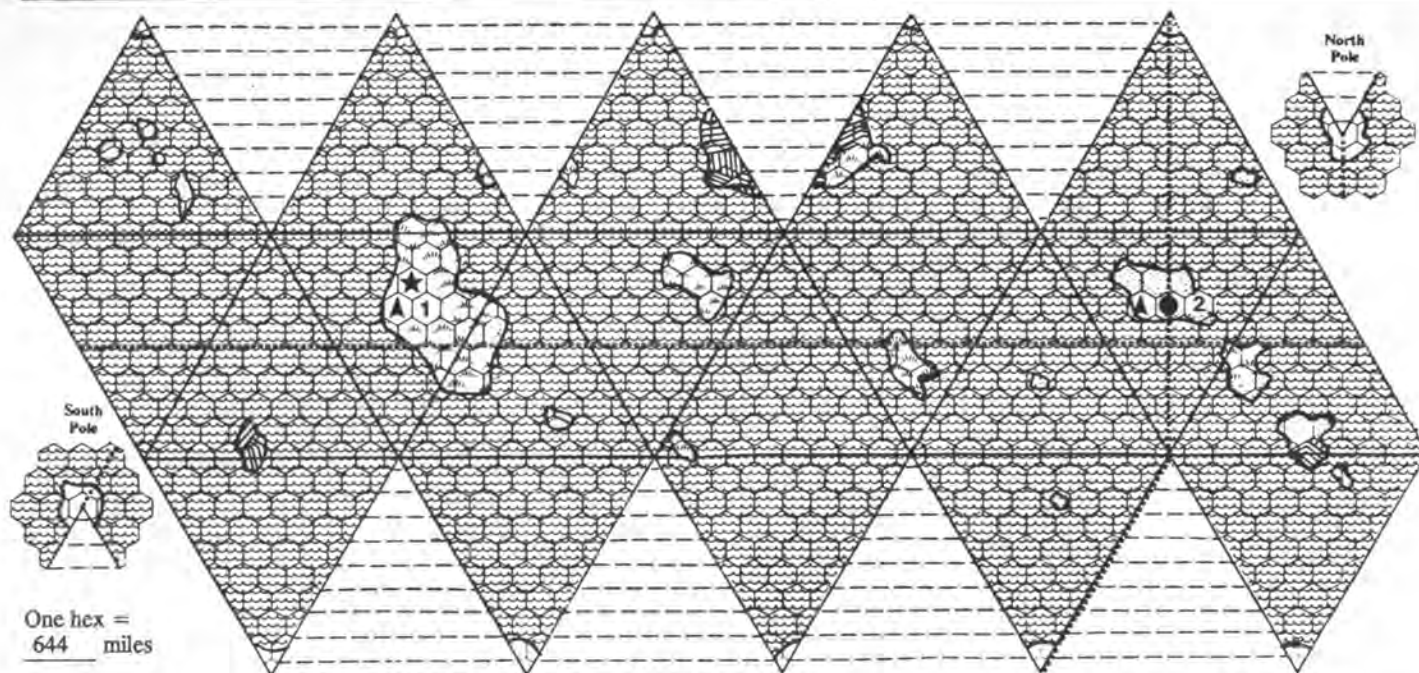
Pearl Divers. The "red stinker," a 12-legged, yard-long arthropod with an awful odor, is the source of a pearly violet material that's in great demand offworld. But . . . red stinkers are shy creatures that live in 30 to 50 feet of water. They are rare near human-populated areas; the places where they are common are Deepie-infested. And the only way to check for purplepearl is to catch the stinker, bring it up, and break its carapace open. Nine times out of ten, there's nothing there. Ten times out of ten, there's that awful odor. One time out of ten, there's a purple lump worth (2 dice) hundred credits!

Worse, the Sinbadders consider the source of purplepearl to be a secret, even though it's common knowledge offworld. The OCA hopes to develop a luxury trade in a few years, once the Deepie problem is solved. PCs asking innocent questions about stinker-diving will meet with obstruction or worse, and if they get any pearl, it may be confiscated.

And worst of all, the Deepies just *love* red stinker, and will be extraordinarily upset with anyone who butchers dozens of them needlessly.



PLANETARY RECORD: Sinbad (Briareus I)



Planet type Earthlike Diameter 9,200 mi. Gravity 1.03 G Density 4.9 Composition Medium-Iron
 Axial Tilt 21° Seasonal Variation Earthlike Length of Day 19.6 hours Length of Year 150 days/ 122 Earth days
 Atmosphere: Pressure 1.02 (Normal) Type and Composition Nitrogen 76%, Oxygen 20%, Argon 2%, others 2%
 Climate: Warm Temperatures at 30° latitude: Low 71° Average 92° High 115°
 Surface Water 93% Humidity 89% Primary Terrain Barren islands
 Mineral Resources: Gems/Crystals Absent Rare Minerals Scarce Radioactives Scarce
 Heavy Metals Scarce Industrial Metals Scarce Light Metals Adequate Organics Adequate
 Moons 4 small moons — Hook, Bligh, Queeg and Teach

Biosphere: Dominant life form "Deepies" — warmblooded amphibians, at least semi-sentient, possibly intelligent
 Other significant life forms Ocean ecology is highly developed, with plentiful life

Civilization: Population(s) 102,600 humans (PR 5) Tech Level(s) 9(10) Control Rating 4/3*

Society Bureaucratic technocracy, profit- and security-oriented

Starports Small Class III at Canton; Class I at First Landing

Installations Colonial office; various research groups studying Deepies and other aspects of the Sinbadese ecology.

Economic/Production Ocean-based economy; sea-mining, fishing, and other organic specialties. Economy not fully developed, and shaky due to Deepie problems.

Other notes: Travelers should beware of hostile natives (see text) whenever outside inhabited areas.

Map key: 1. Canton 2. First Landing. *Weapon CF 3, due to Deepie threat

System Information:

Star Name Briareus Type K6 V Location Old Frontiers 8/12/10

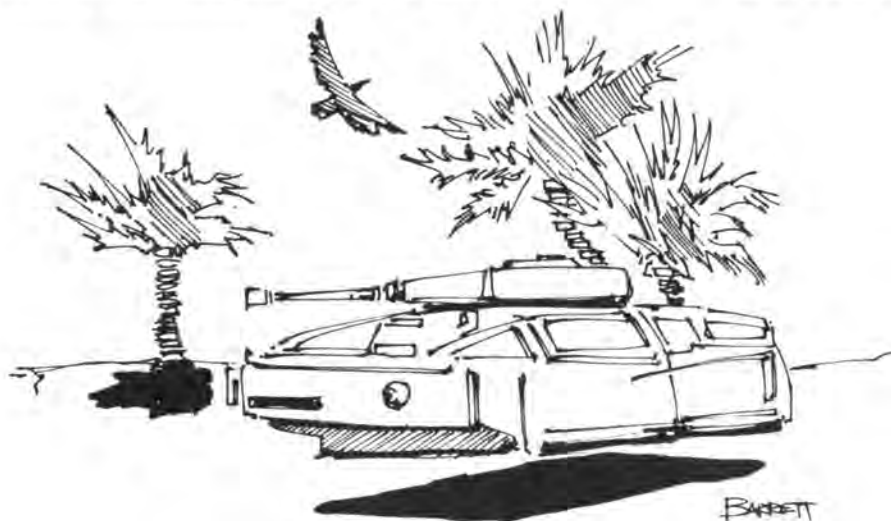
Biozone .5-.6 AU Inner Limit 0 Number of Planets 11

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Sinbad	1	.5	Earthlike	9,200	4.9	1.03	Oxygen-Nitrogen	detailed above
Nemo	2	.8	Terrestrial	6,200	5.1	.72	Very thin Nitrogen-CO ₂	Cold desert; no water
Ahab	3	1.1	Rockball	1,200	5.2	.14	None	Copper, cobalt present
Perry	4	1.7	Rockball	2,600	4.1	.24	None	
Popeye	5	2.9	Gas giant	31,000	1.9	1.35	Hydrogen-Methane	Spectacular rings
Quinn	6	5.3	Gas giant	22,000	2.2	1.11	Hydrogen-Methane	Has its own asteroid belt
Nimitz	7	10.1	Iceball	4,600	3.2	.34	Trace nitrogen	No recorded landings
Drake	8	19.7	Gas giant	15,000	1.8	.62	Hydrogen-Helium	Green/violet bands
Magellan	9	38.9	Rockball	9,200	4.0	.84	Trace CO ₂	No recorded landings
Columbus	10	77.3	Rockball	6,200	4.5	.64	None	No recorded landings
Bering	11	154.1	Iceball	5,600	3.9	.50	Trace CO ₂ , H ₂ O	No recorded landings

Summer (Summersun IV)

The planet Summer is an earthlike world just coming out of an ice age; some say Spring would have been a more apt name, but the world's discoverer was from a very cold planet, and to her, its merely cool climate seemed heavenly. A large percentage of the planet's land area is still covered with glaciers. The remainder of the habitable surface areas are either tundra or grassy savannahs, spotted with many small lakes. There is no plant life larger than tall grass. The indigenous animals are well-adapted to the cold; they are covered with thick hairy hides, or live underground where temperatures are not so frigid.

Summer is the headquarters and base planet of the Summersun Mercenary Co-op, the most prominent merc company in the Old Frontiers and surrounding sectors. The entire population of Summer is made up of combat troops, support personnel or dependents. However, well over 2,000,000 of those "support personnel" are not military at all, but farmers employed by the various mercenary units. And several of the larger units are building up their own arms industry. Thus, the planetary economy is becoming increasingly self-sufficient.



Summersun mercs are widely employed throughout the Old Frontiers, serving as corporate security forces on several worlds, including Bollux and Byte, as well as in other private capacities. The Co-op, partly because of its "understanding" with the stellar authorities and largely because of the quality and efficiency of its units, has a virtual monopoly on mercenary services in the sector and in many other sectors as well.

The Co-op had its roots in two smaller mercenary companies, Leatherman's Leathernecks and Wheeler's Commandos, each of which was hired to take control of the planet. Leatherman's was sponsored by a would-be colony group from Utmost; Wheeler's by Goliath Weaponry. The two units, both made up of well-equipped veterans, fought to a standstill after months of hard conflict. Meanwhile, Goliath and the Utmosters were negotiating behind the merc's backs. In the end, Goliath agreed to buy out the Utmost interest . . . and both defaulted on their payments to the merc companies.

Learning of their employers' faithlessness, Leatherman and Wheeler arranged a parley. They came to an agreement that neither of their former employers had expected — or desired. Leatherman and Wheeler agreed to merge their organizations;

then they claimed Summer themselves, in the names of their companies, as payment for services rendered. Not surprisingly, the Mercenary Licensing Agency supported the merc leaders' claims. Goliath couldn't find a competent mercenary company willing to drop on Summer and dig Wheeler and Leatherman out . . . so they cut their losses and abandoned the planet.

With the Summersun Mercenary Co-op a recognized mercenary organization, Leatherman and Wheeler invited other merc companies to join them. Soon, nearly all of the most respected mercenary units in the sector had joined the Co-op, and Summer had been divided among them. Training facilities were built, first on Summer and then on other worlds in the sector. Cooperative recruiting and arms-buying efforts began. Summersun was a going concern.

Summersun is ruled by the Co-Op Council, composed of the commanding officers (or, more often, their representatives) of the merc units. Only a couple of dozen units are large enough to be represented on the Council. But there are hundreds of smaller units, whose leaders vote on a single Council representative.

The Co-op is currently able to field more troops than many planetary defense forces. Although the majority of Summersun mercs are human, several regiments are either mixed human/alien or all-alien in nature, giving the Co-op a wider range of conditions under which it can successfully field troops. Many of the aliens, by their natures, make excellent special-duty troops.

Infantry, mechanized, air-support or ocean-going units can be provided by the Co-op for nearly any condition. Several hostile environment training facilities have been leased on other worlds, so the Summersun units are experienced in a wide variety of environments. And the mercs have their own system defense naval force that can be contracted out and that protects Summer itself.

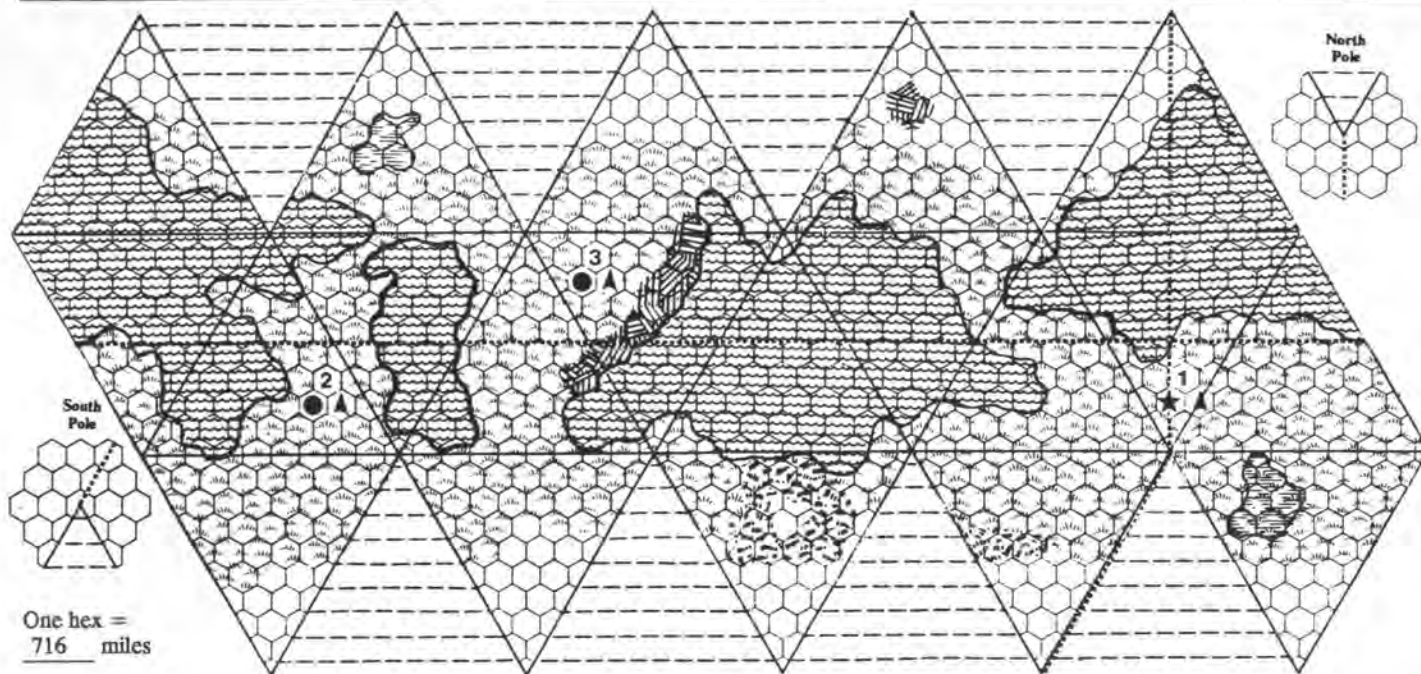
Wherever there is a demand for trained fighting men anywhere in the Old Frontiers or its surroundings, the Summersun mercs are ready for action. Although there are a number of different units within the Summersun Co-op, all nominally independent, the Co-Op Council considers each hiring offer. Under no circumstances will Summersun enter both sides of the same conflict.

Adventures on Summer

War Stories. The party arrives on Summer with a military correspondent — a reporter from one of the interplanetary news services, looking for a story. There is a rumor that Summer troops are training in a very detailed mockup of Redugun's capital city . . . If the PCs are in the reporter's pay, they might be asked to join a merc unit, as fighters or auxiliaries, to investigate from the inside.

War Games. The smaller independent units on Summer include hundreds of combat teams, from company down to platoon size, which hire out for very small jobs or fill out the large units' forces. The Hiring Hall at Summertown is always a busy place. A campaign with a military bent could center on the Hiring Hall, with the PCs as hired guns (or tankers, or fighter jocks) trying to build a reputation for their own small unit.

PLANETARY RECORD: Summer (Summersun II)



Planet type Earthlike Diameter 10,230 mi. Gravity 1.05 G Density 4.5 Composition Low-Iron
 Axial Tilt 22° Seasonal Variation Earthlike Length of Day 13 hours Length of Year 1,300 days/ 703 Earth days
 Atmosphere: Pressure .95 (Standard) Type and Composition Nitrogen 77%, Oxygen 21%, others 2%
 Climate Cool Temperatures at 30° latitude: Low 47° Average 60° High 73°
 Surface Water 24% Humidity 41% Primary Terrain Plains
 Mineral Resources: Gems/Crystals Scarce Rare Minerals Scarce Radioactives Ample
 Heavy Metals Ample Industrial Metals Ample Light Metals Ample Organics Scarce
 Moons 2 moonlets (Maleen and The Leewit), 1 small moon (Goth), 1 medium (Pausert)

Biosphere: Dominant life form Egg-laying mammal analogs
 Other significant life forms Complete, earthlike ecology, with advanced plants and lower animals

Civilization: Population(s) 12 million (PR 7) Tech Level(s) 10 Control Rating 3/1*

Society Military bureaucracy headed by "Co-Op Council" — effectively a ruling junta

Starports Class IV at Summertown; Class III at Tinklewood and SSDF (government)

Installations Mercenary Regulatory Agency sector headquarters

Economic/Production Self-sufficient in agriculture; no exports except manpower; imports weaponry

Other notes: Map key: 1. Summertown (capital) 2. Summersun System Defense Force base 3. Tinklewood

* Since this is a military society, Summer has CR 1 for weaponry, but very strict punishment for crimes involving heavy weapons

System Information:

Star Name Summersun Type G0 V Location Old Frontiers -3/8/-4
 Biozone 0.8-1.2 Inner Limit 0 Number of Planets 5

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
—	1	.3	(Empty orbit)	—	—	—	—	—
Dolo	2	.6	Hot rockball	6,250	2.9	.42	Thin methane	No recorded landings
—	3	.9	(Empty orbit)	—	—	—	—	—
Summer	4	1.5	Earthlike	10,230	4.5	1.05	Oxygen-Nitrogen	Detailed above
Yirga Alem	5	2.7	Gas giant	81,150	2.2	4.09	Hydrogen-Methane	Spectacular ring
Goba	6	5.1	Gas giant	33,250	1.2	.91	Hydrogen	Oort belt
Baherdar-Giyorgis	7	9.9	Iceball	3,100	3.9	.28	None	—
—	8	19.5	Asteroid belt	—	—	—	—	—

Survias (Core-Tiann I)

This is a green and pleasant world, warm and heavily populated. But Survias currently supports one of the most repressive dictatorships ever to develop on any world in human space. Although the planetary government has been authoritarian for hundreds of years, earlier rulers were relatively benevolent. But the current Autarch, Ryoc IV, appears to be literally insane. According to former insiders who fled the planet, her idea of relaxation is to perform sadistic medical experiments on "patients" in the political wing of the State Hospital. Certainly she is arrogant and arbitrary, and her whim means life or death for everyone on Survias.

Although a rebel underground exists, potential uprisings are held firmly in check by Ryoc's secret service, the "Health Police." This force effectively keeps the public under Ryoc's thumb — with threats of treatment for various unhealthy conditions, both physical and mental. Any manifestation of physical illness is now *illegal* on Survias; among her other problems, Ryoc is a raving hypochondriac, terrified of disease. And any

dissatisfaction with Ryoc's benevolent rule is a clear sign of *mental* illness! Those whom the HPs take away for "treatment" are rarely seen again.

The Health Police, strange though they seem to offworlders, are modern and well-equipped. Survias is a very efficiently-run world . . . not only do the trains run on time, but they are spotlessly clean. Visitors to the planet joke that dying is a capital offense on Survias. If they knew who was listening, they wouldn't talk so freely.

Among other things, the HPs have almost every computer on Survias "bugged." All computers built on Survias, and all computers legally imported, have monitor circuits built in. As a result, every single transaction or conversation on the planet, if made through a computer or public communication channel, can be examined for treasonous intent. The established resistance knows this, but the common people don't . . . and any attempt to spread the news is easily blocked by the HPs, who control the media. So most would-be rebels are picked up long before they make contact with the underground.

Survias is a highly developed industrial world, with little uninhabited area. At one time, it was extremely prosperous. It still produces a great deal of wealth, but most of it now funnels into Ryoc's various schemes, including every anti-agathic drug or treatment that is to be had. At least the citizens benefit from the imported medical technology.

All in all, this is a risky place to visit. But Survias' trade opportunities more than overbalance the hazards to offworld visitors — for now. As long as the mad leader confines her attentions to her own people, neighboring worlds seem likely to look the other way. This may change if the mad leader starts to take an aggressive posture toward other planets. But if no offplanet force intervenes, Ryoc seems destined to live and rule for a very, very long time.

Medicine

Preventative medical care is free to Survias citizens, as is treatment for injuries. Visitors can be treated at ¼ the price most worlds would charge. Quality of care is excellent; the best hospitals are experimenting with TL11 techniques.

Keeping Time

Survias' year is less than 18 Earth days long, and its day is only 8.1 hours. Therefore, on Survias, one day-night period is called a "shift," and three "shifts" make up an official Survias day of just over 24 hours. Because there is no particular advantage to working (or sleeping, or playing) on any particular shift, most establishments on Survias are open around the clock.

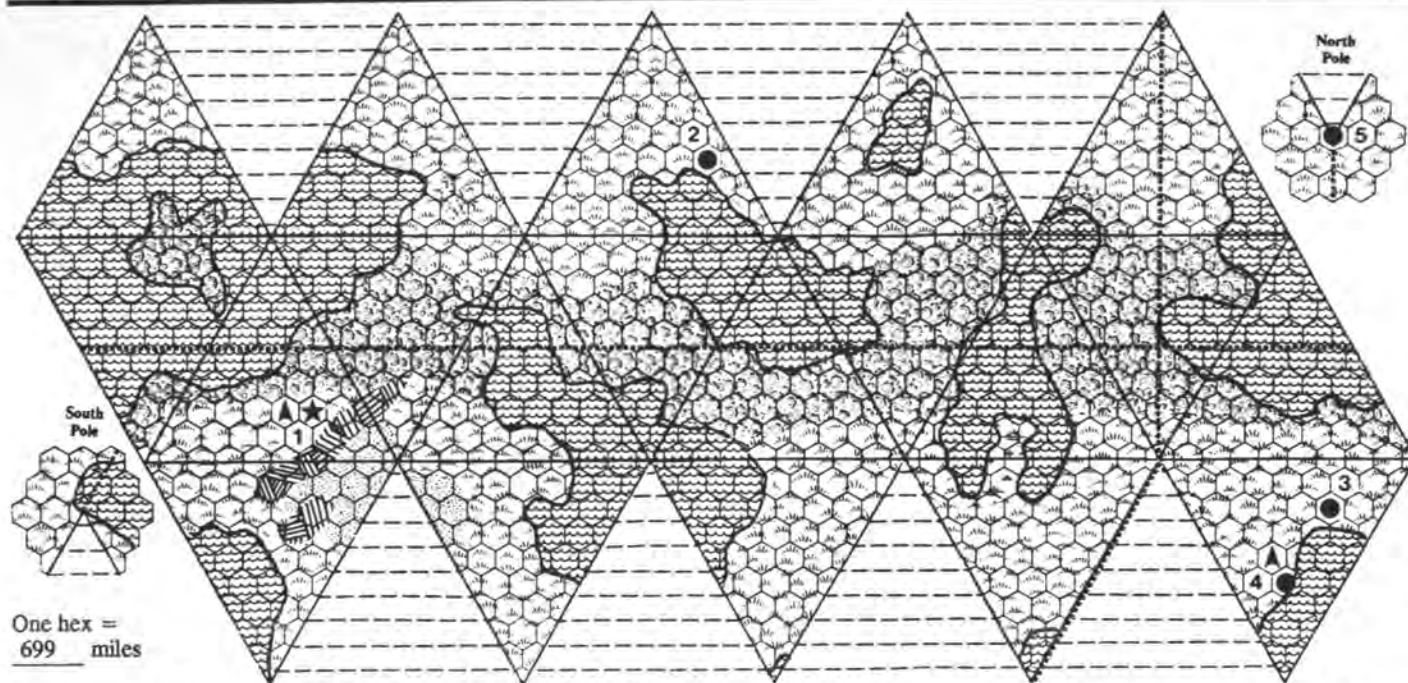
Adventures on Survias

Gunrunning. The rebel underground is well-financed but badly armed. Spacers visiting Survias, if they seem at all critical of Ryoc's government, will be contacted and offered high payment if they'll just bring in a cargo of weapons, un-bugged wristcomps, and other goods for the rebellion. Of course, the Health Police is always watching.

The Computer Is Not Your Friend. Next to Ryoc herself, the underground's chief target on Survias is the Health Police monitoring computer. PCs who have proved themselves trustworthy might be recruited in an attempt to destroy the computer, either by an armed attack or by somehow feeding it false or destructive data. Remember: the Survias computer system monitors almost every conversation on the planet.



PLANETARY RECORD: Survias (Core-Tiann I)



Planet type Earthlike Diameter 10,000 mi. Gravity 1.05 G Density 4.6 Composition Medium-Iron
 Axial Tilt 22° Seasonal Variation Mild* Length of Day 8.1 hours Length of Year 53 days/ 18 Earth days
 Atmosphere: Pressure .91 (Standard) Type and Composition Nitrogen 80%, Oxygen 18%, others 2%
 Climate Warm Temperatures at 30° latitude: Low 70° Average 91° High 110°
 Surface Water 32% Humidity 41% Primary Terrain Plains and forest
 Mineral Resources: Gems/Crystals Ample Rare Minerals Scarce Radioactives Ample
Heavy Metals Scarce Industrial Metals Ample Light Metals Ample Organics Plentiful
 Moons 2 medium moons — Sulfa and Affrin

Biosphere: Dominant life form Native life substantially replaced by imported ecology, primarily Terran
 Other significant life forms _____

Civilization: Population(s) 9.6 billion (PR 9) Tech Level(s) 10** Control Rating 6

Society Bureaucratic dictatorship with enforcement by "Health Police"

Starports Class V at Ryoc; Class IV at Planterstown

Installations Polar Subneutrino Observatory

Economic/Production Exports food and some organics

Other notes: Map key: 1. Ryoc (capital) 2. Benares 3. Arretoni 4. Planterstown 5. Polar Observatory; * Short year minimizes variation

** Excellent medical care available — some medicine is TL 11. **Warning:** It is illegal to be sick on Survias!

System Information:

Star Name Core-Tiann Type M1 V Location Old Frontiers -6/-5/8
 Biozone 0.1-0.2 Inner Limit 0 Number of Planets 4

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Survias	1	.2	Earthlike	10,000	4.6	1.05	Oxygen-Nitrogen	Detailed above
—	2	.5	(Empty orbit)	—	—	—	—	—
—	3	.8	(Empty orbit)	—	—	—	—	—
—	4	1.4	Asteroid belt	—	—	—	—	—
—	5	2.6	Asteroid belt	—	—	—	—	—
Harbeson	6	5.0	Gas giant	71,000	1.6	2.60	Hydrogen-Methane	Faint ring
—	7	9.8	(Empty orbit)	—	—	—	—	—
—	8	19.4	Asteroid belt	—	—	—	—	—
Bayard	9	38.6	Iceball	3,200	5.1	.37	None	—
Gumboro	10	87.0	Iceball	4,100	4.2	.39	None	—

Talisman (Perrin III) — Quarantined

The jungle world of Talisman is hazardous both because of its hazardous plant life and because of its unstable sun. Perrin, a UV Ceti flare star, was targeted by an early generation ship; rather than head back into space, the colonists decided to take the world as they found it.

Every decade or so, Perrin flares up, bathing the planet in dangerous levels of lethal radiation. Radiation levels remain high for one to three years after the initial flare, eventually dying down to tolerable levels until the next flare. Since the planet has rich mineral resources, many communities simply live underground all the time, building living quarters in the tunnels left by played-out mines. This also keeps them away from the Talisman plant life.



The native life on Talisman is extremely radiation-resistant, and mutates rapidly. It is also highly adaptive and viciously competitive. Specimens introduced to other worlds have rapidly become dangerous pests. Therefore, the world is quarantined. Other worlds will not accept any Talisman goods unless they have been very thoroughly treated and sterilized . . . an expensive process, considering the radiation-resistance of the local life. Even manufactured goods are viewed with suspicion.

Most Talisman plants are hazardous simply because of their hardness — they're ordinary weeds that grow several feet a day and scatter seed a week after they sprout. But some are dangerous in their own right. In the jungle areas of Talisman, a filter mask is advisable; otherwise, hazardous pollens and other plant by-products may be inhaled, with widely varying effects (see below). A Talisman filter costs \$100 and lasts (1 die) months, depending on just what the wearer comes in contact with.

As for the animal life, nothing higher than insects has developed, but there is a huge variety of "bugs," many of which are dangerous to jungle explorers.

Talisman Station

This is a typical quarantine station. It is in synchronous orbit over Mainport, and controls a net of observation satellites that watch the whole planet. There are 12 satellites; at least three would have to be eliminated to leave a "blind spot."

The station has a staff of about 100. Its main facilities are a docking area (where ships leaving the planet must stop for inspec-

tion) and a hangar bay holding a dozen fighter craft (which are scrambled at any sign of a ship trying to slip past). Should Talisman be approached by a ship too formidable for the station fighters to handle, the station will call for help before the ship gets near. No one except station personnel is allowed outside the inspection docks. Inspection typically takes two hours per 1,000 cy of ship, plus any extra time required if the inspectors insist on irradiating cargo, exposing it to vacuum, fumigating it, and so on. While no government agency is wholly incorruptible, the inspection crews have all seen films of the damage done by Talisman life, and they'll be very hard to buy off.

If interstellar society is anarchic, Talisman Station is still there, operated cooperatively by several nearby planets — perhaps the only thing they can agree on!

Dangerous Talisman Plants

Aldo bush. A low-growing silvery bush, found only in jungle areas. Its pollen, if inhaled, produces hallucinations. Roll vs. HT every 10 minutes to avoid the effects. If someone is affected, the GM should tell him that he sees (for instance) giant spiders, lurking aliens, and so on. Raw aldo pollen brings \$10,000 per pound offplanet, but is highly illegal, and Talisman Station's chemscanners are set to detect it.

Smother fronds. A general name for a wide variety of carnivorous plants whose movable, sticky leaves capture animal prey. Little ones are just shoe-grabbing nuisances. Medium-sized ones can require a ST roll to escape.

Man-sized ones, tall enough to reach a human's face, are dangerous. A victim will be grabbed by (2 dice) fronds at a time. Each frond has a 1/6 chance of slapping itself over nose and mouth, cutting off the victim's breath! An air mask is no help here unless air tanks are also worn. If a frond catches your face, you have only the air in your lungs to go on. You can survive for HT turns while struggling, or (HTx10) turns if you wait quietly for help. After your air is gone, you lose one Fatigue per turn, until you fall unconscious. Death follows four minutes later, unless you can start breathing again.

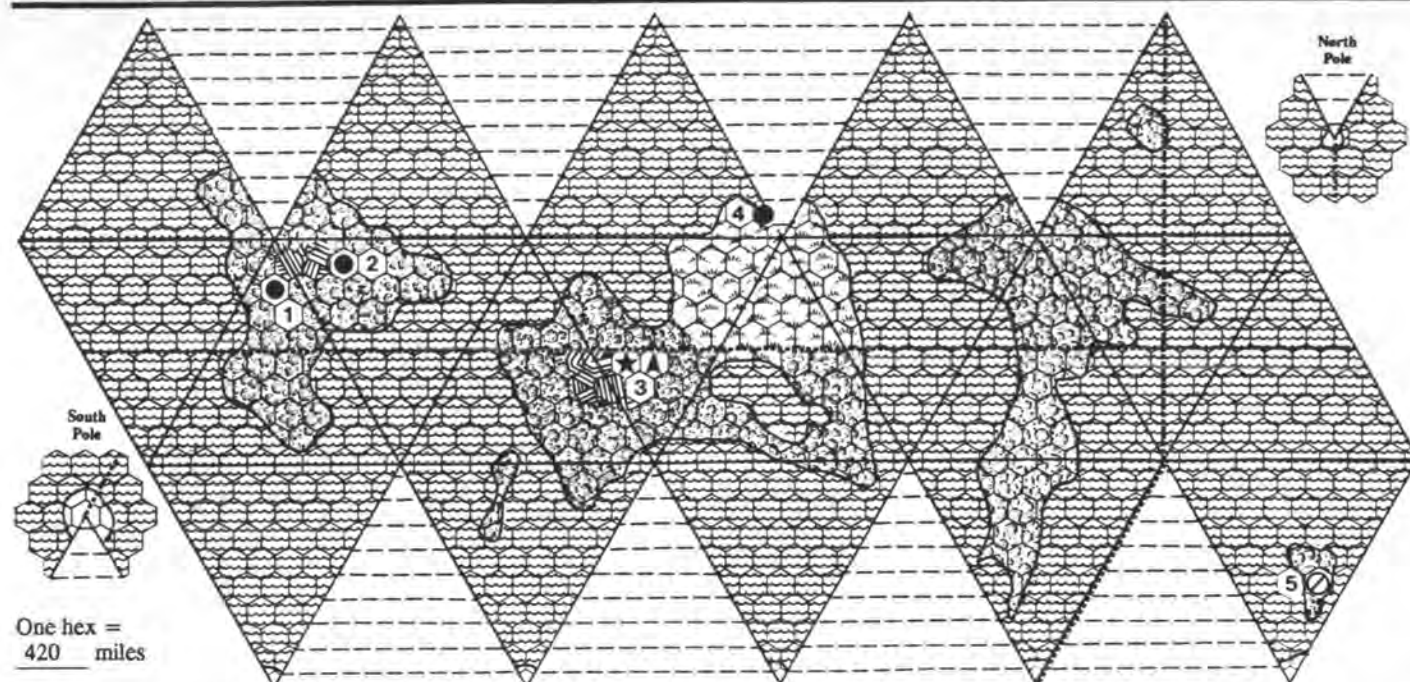
Mere strength cannot pull free of fronds this big. Individual fronds can be cut, if the victim has a knife. It takes 10 seconds to cut a frond loose, and a DX roll is required to cut one without coming in reach of another one. Fronds digest their victims bones and all; unless a frond patch has previously caught humans, whose gear is indigestible, there will rarely be any bones or other warning that a patch is dangerous.

Adventures on Talisman

Quarantine Break. The PCs' ship makes an emergency stop on Talisman. Landing on the planet, after all, is permitted. But leaving again is illegal, without clearance from both Mainport and Talisman Station. This can be inconvenient if the PCs aren't willing to submit to a careful examination of their entire ship, with scanners of all type, including chemscanners set for Talisman life. Alternatively, PCs on Talisman can be approached by someone asking to be smuggled offworld. She claims to be a political refugee, and that if she's caught at the quarantine station she'll be returned to the planet for a kangaroo-court trial. It might even be true.

Johnny Weedseed. The party is hired as part of a mission into an especially dense part of the Talisman jungle, to collect seeds and specimens. The collecting expedition is supposedly sponsored by the Escott Institute, on Pleroo (see p. 42), but some of the details don't seem to ring true.

PLANETARY RECORD: Talisman (Perrin III)



Planet type Greenhouse Diameter 6,000 mi. Gravity .88 G Density 6.4 Composition High-Iron
 Axial Tilt 1.5° Seasonal Variation None Length of Day 87 hours Length of Year 2,400 days/ 23.7 Earth years
 Atmosphere: Pressure 1.1 (Standard) Type and Composition Nitrogen 71%; Oxygen 22%; CO₂ 4%; Other 3%
 Climate Hot Temperatures at 30° latitude: Low 88° Average 109° High 127°
 Surface Water 77% Humidity 92% Primary Terrain Tropical jungle dominates all continents
 Mineral Resources: Gems/Crystals Plentiful Rare Minerals Plentiful Radioactives Ext. Plentiful
 Heavy Metals Plentiful Industrial Metals Plentiful Light Metals Ext. Plentiful Organics Ample
 Moons None

Biosphere: Dominant life form Large insects and small reptiles
 Other significant life forms Rapidly mutating vegetation, often with toxic pollen

Civilization: Population(s) 180,000 (PR 5) Tech Level(s) 9 Control Rating 3

Society Socialist government, almost wholly patriarchal

Starports Class III in orbit; Class II at Mainport

Installations Talisman Station (manned by Patrol and Talisman) in orbit to enforce quarantine; refineries at Mainport, Barrett, and Tevvik

Economic/Production Mining world — exports radioactives, crystals and metals. Imports mining equipment.

Other notes: Map key: 1. Barrett 2. Tevvik 3. Mainport (capital) 4. Outpost 5. Hoodara Island — prohibited: especially hazardous fauna
 Plant life is highly mutated and dangerous, due to radiation flares; jungles should be avoided. All ships leaving must stop at Talisman Station

System Information:

Star Name Perrin Type M4 III Location Old Frontiers 13/6/4
 Biozone 5.0-7.5 Inner Limit .1 Number of Planets 7

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
—	1	.4	(Empty orbit)	—	—	—	—	—
Illinar	2	.7	Huge gas giant	170,000	.6	2.34	Hydrogen	1 moon is sm. gas giant
—	3	1.0	(Empty orbit)	—	—	—	—	—
—	4	1.6	Asteroid belt	—	—	—	—	—
Thaitos	5	2.8	Terrestrial	17,000	3.9	1.52	Superdense nitrogen	95 atmospheres
Talisman	6	5.2	Greenhouse	6,000	6.4	.88	Oxygen-Nitrogen	Detailed above
—	7	10.0	(Empty orbit)	—	—	—	—	—
Cloud	8	19.6	Gas giant	73,500	2.1	3.53	Hydrogen-Methane	Faint ring
—	9	38.8	(Empty orbit)	—	—	—	—	—
Sedon	10	77.2	Gas giant	49,000	.9	1.01	Hydrogen	31 moons
Alkon	11	154.0	Gas giant	31,500	2.2	1.59	Hydrogen	—
—	12	307.6	(Empty orbit)	—	—	—	—	—
Trinket	13	614.8	Iceball	3,750	1.4	.12	None	Frozen

Terra Nouveau (Corrin III)

Terra Nouveau is one of those worlds named by a scout with a perverse sense of humor. A small, rugged world on the fringe of the frontier, Terra Nouveau went unclaimed and unsettled until a Kreider Mining Corporation survey discovered rich veins of superdense metals just beneath the planet's surface.

The world is a very unpleasant one. The atmosphere is hot and dense, consisting in large part of corrosive nitrides. Another 2% of the atmosphere is hydrogen sulfide, and the rotten-egg odor clings to everything on the planet. Plant life on Terra Nouveau is healthy, varied, and all deadly poisonous to man. Several species of local bacteria can metabolize sulfur and silicon compounds. This means that flexible seals need to be checked daily, and their failure rate is much higher than on comparable, but lifeless, worlds (-2 to all pressure-integrity checks).

Other than the Kreider Mining outpost, nestled near the small starport, the planet's only installations are the Summersun Hostile Environment Training Camps, leased in exchange for providing system defense and anti-piracy patrols. The main camp is located in a relatively temperate area; a second camp, in the equatorial area, is used for advanced training in extra heat.

The Summersun bases have almost nothing to do with the Kreider installation, though the mercs usually take R&R in the company store/night-club at the starport.

The starport itself barely qualifies for its Class III rating. Since the mercs have their own system defense base, only the mining company and the independent traders that sometimes visit the world use the port.

Aside from the humans who seek out and mine the planet's veins of superdense metals, and the mercenary contingent, Terra Nouveau is uninhabited. The largest known native animals are the gliderlike "Windriders" that are sometimes seen navigating the erratic wind currents. Little is known about the Windriders, as none have ever been captured alive. Their thin, membranous bodies seem to break down and disintegrate at once upon death.

From time to time, miners working remote veins of ore have returned with claims of having seen *something* man-sized or larger lurking in the dense mists. No evidence of such creatures has ever been discovered, and these are generally dismissed as atmospheric mirages coupled with the overactive imaginations

of men working on a lonely, hostile world. Among the miners, a superstition has grown up about these "mist beasts." It is said that when one is spotted, a death will surely follow. The superstition (if it is one) seems to persist, no matter what Kreider's foremen do to squelch it.

Adventures on Terra Nouveau

Wheels Within Wheels. The Summersun presence here serves a dual purpose. The main Summersun base is just what it appears to be — a hostile-environment training camp. But the equatorial base is actually, for the most part, an R&D facility specializing in testing new weaponry. This is a violation of the Co-op's standing contract with Krieder, as well as its very

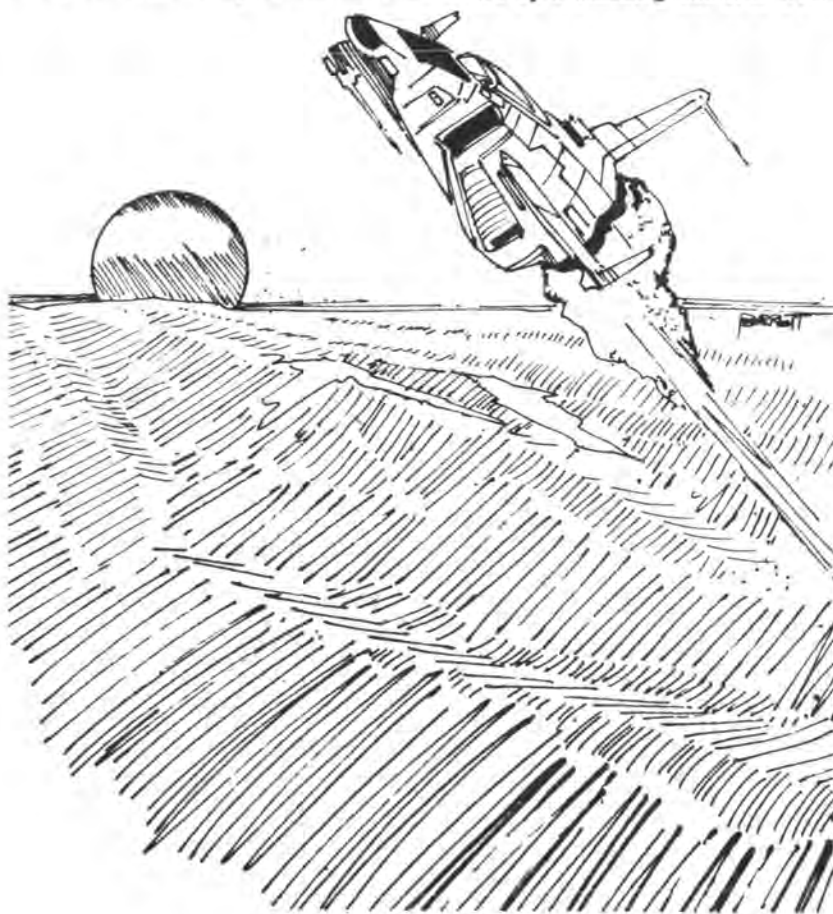
license to operate. Should the authorities learn of this indiscretion on the part of the Co-op, the disclosure could have serious consequences for the mercenaries. PCs may become involved as mercs trying to keep the secret, as reporters or government agents looking into rumors, as infiltrators (possibly from a rival merc group) hoping to make trouble, or as Krieder employees or contractors. This last could be especially interesting; if Krieder finds out about the situation, it will want to end the weapon-testing without publicity, and will no doubt try to use the information as extra leverage on Summersun.

One other possibility: The PCs might come into possession of proof that the Terra Nouveau base is testing weapons. They are now holding very valuable,

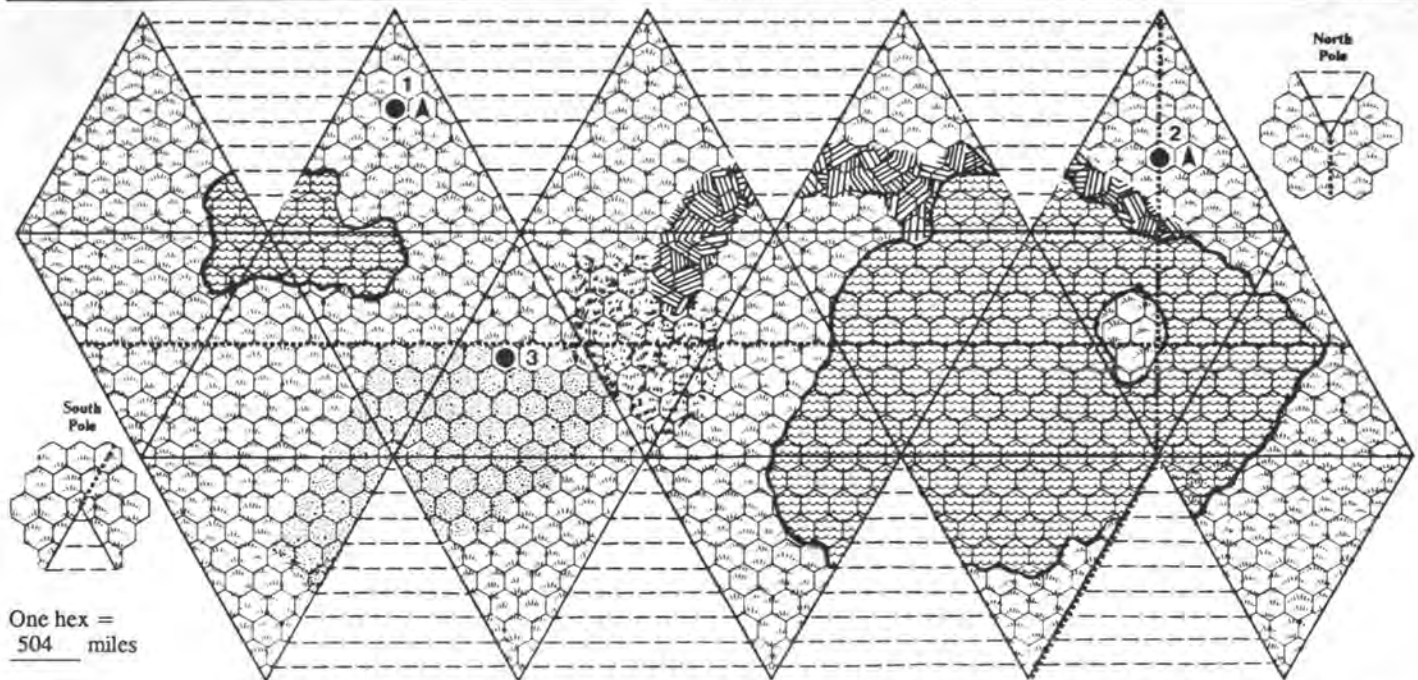
and very dangerous, information. Summersun or Krieder would offer a lot for their silence. A government agency might pay well, in cash or favors due, for the chance to crack down on Summersun. And the mercs might just decide that the most efficient thing to do is to close the PCs' mouths permanently . . .

Mist Beasts. After a series of Mist Beast sightings — and an accidental death in the area, the same week — a miner of the PCs' acquaintance claimed to have gotten pictures of the creatures. Then he vanished. The next week, a furtive figure accosts one of the PCs in a bar, says "From Rusty," slips them a computer disk, and vanishes. Rusty is (was?) the missing miner.

The disk is labeled to indicate that it contains photographs — but it's encrypted. And while the spacers are trying to get the code broken so they can look at the pictures, someone is trying to steal or destroy the disk — or eliminate everybody who knows of it.



PLANETARY RECORD: Terra Nouveau (Corrin III)



Planet type Hostile Terrestrial Diameter 7,200 mi. Gravity 1.06 G Density 6.4 Composition High-Iron
 Axial Tilt 12° Seasonal Variation Mild Length of Day 13 hours Length of Year 2,630 days/ 3.9 Earth years
 Atmosphere: Pressure 1.6 (Dense) Type and Composition Nitrogen 64%; nitrides 28%; CO₂ 6%; H₂S 2%
 Climate Tropical Temperatures at 30° latitude: Low 82° Average 100° High 117°
 Surface Water 21% Humidity 92% Primary Terrain Rolling hills with dense vegetation
 Mineral Resources: Gems/Crystals Scarce Rare Minerals Plentiful Radioactives Plentiful
 Heavy Metals Plentiful Industrial Metals Plentiful Light Metals Ext. Plentiful Organics Absent
 Moons One large moon — Luna Nouvelle

Biosphere: Dominant life form Windriders (?), lower plants, flying insects
 Other significant life forms Sulfur-loving algae

Civilization: Population(s) 6,200 (PR 3) Tech Level(s) 10* Control Rating 4

Society Corporate — administered by Krieder Mining Corporation

Starports Class II at Krieder HQ and Summersun Training Camp

Installations See text

Economic/Production Mining

Other notes: 1. Summersun Training Camp 2. Krieder HQ 3. Summersun Equatorial Camp

* All high-tech equipment is imported

System Information:

Star Name Corrin Type F9 V Location Old Frontiers -18/7/-3
 Biozone 1.6-2.4 AU Inner Limit 0 Number of Planets 7

Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
—	1	.4	(Empty orbit)	—	—	—	—	—
Griddle	2	.8	Rockball	900	6.2	.13	None	No landings recorded
Skillet	3	1.2	Rockball	6,600	6.8	1.03	Very dense nitrides	Metal-rich but <i>hot</i>
Terra Nouveau	4	2.0	Hostile terrestrial	7,200	6.4	1.06	Nitrogen, nitrides, CO ₂	Detailed above
Bertha	5	3.6	Gas giant	26,100	1.9	1.14	Hydrogen-Methane	Two red spots
—	6	6.8	(Empty orbit)	—	—	—	—	—
Okey	7	13.2	Gas giant	42,200	2.1	2.03	Hydrogen-Methane	Ringed
Dokey	8	26	Gas giant	18,000	2.0	.82	Hydrogen	19 moons
Frigid Aire	9	51.6	Iceball	7,100	3.8	.62	Trace CO ₂ -H ₂ O	Large ice deposits

Von Berg (Korris III)

Von Berg is a small, frozen world with a thin, dust-filled atmosphere. Coupled with the relatively feeble light from its dim red sun, the dust clouds in the atmosphere keep the world in a state of perpetual twilight, even at the height of its long day. Von Berg has never had any importance other than its great abundance of gemstones and industrial crystals; other than that, it is a typical frozen rockball in a typical system of useless, dead worlds. Its whole population is made up of miners — independent and corporate — and those who provide the goods and services the miners need. However, much of the world's mining activity was curtailed some ten years ago, when a very strange form of life was discovered on the planet.

The discovery of Von Berg's native intelligence came as a fluke. A highly sensitive psionic talent was brought to the world by an independent prospector hoping to locate new fields of crystalline wealth. The psi was troubled by recurrent dreams. Eventually, she realized she was tapping into intelligent thought, and traced it to a field of crystal pillars. She reported this to the Survey Service. All crystal mining operations were shut down by the Patrol at soon as the horrible implications were realized — the "crystals" mined so far might well have been intelligent, and the mining operations could have killed millions of sentient entities.

A Survey research station was established on Von Berg to study and attempt further communications with the crystal intelligences. Since the shutdown of crystal mining on Von Berg, the planet has undergone a period of economic depression, with careful mining of its less-important radioactives the only allowed industry.

The Crystal Towers

These towers, averaging a foot square and 8-12 feet high, are, in fact, intelligent and very long-lived. They are incapable of communication with mankind except telepathically, and even this is difficult (-6 to skill, on any attempt by a human psi). They are a sort of "Precursor artifact" — sentient, self-replicating crystal computers. Millions of years ago, they used their telepathic powers to destroy their creators and take the world for themselves. They are, in fact, quite hostile to man, and would happily kill everyone on the planet, even if man had done them

no harm. But their telepathy is on the wrong wavelength; they started attacking as soon as the first scout landed on Von Berg, and nobody even noticed until the sensitive arrived and had bad dreams! Unfortunately for them, they are helpless against mankind; they cannot move, and reproduce very slowly.

Most of the crystals found on Von Berg are "living" descendants of Precursor devices, but only the towers are sentient, and only the towers are useful as computers.

None of this is known yet, but it's only a matter of time until Survey brings in a good enough psi to communicate with the towers.

Adventure on Von Berg

Crystal Wars. When Survey finds out that the crystals are hostile, there will be renewed demands to wipe them out, or at least "farm" them — especially since a dead crystal is not only beautiful, but can be used as a matrix for very powerful computers. At that point, the PCs could find themselves hired by mining companies . . . or by "Save-the-Crystals" groups from offplanet. The catch is that the towers don't *have* to be helpless. They are, after all, computers. Remote-control vehicles or even weapons could easily be modified for their use. There's a limit to how much weaponry the do-gooders will offer them for free . . . but the crystals are quite ruthless, and will fight among themselves, killing and selling some of their number in order to protect themselves. Any PCs who can communicate with the crystals may wind up working for them!

Eventually, the crystals could buy ships and get into space. At that point they could become a menace; they don't like organic life, especially organic life that builds and "enslaves" computers as their long-dead builders did.

Crystal Characters

In a campaign where the Crystal Wars have begun, a crystal PC would be possible. This requires the crystal to be removed from its matrix and "augmented" — that is, hooked up to a voice-box and other peripherals, making it essentially a sentient computer. This requires a week's work (longer if appropriate peripherals have not been prepared in advance). It also requires an Engineering roll made by someone who understands crystal operations — which won't happen until the crystals have been studied for a while and the wars have started.

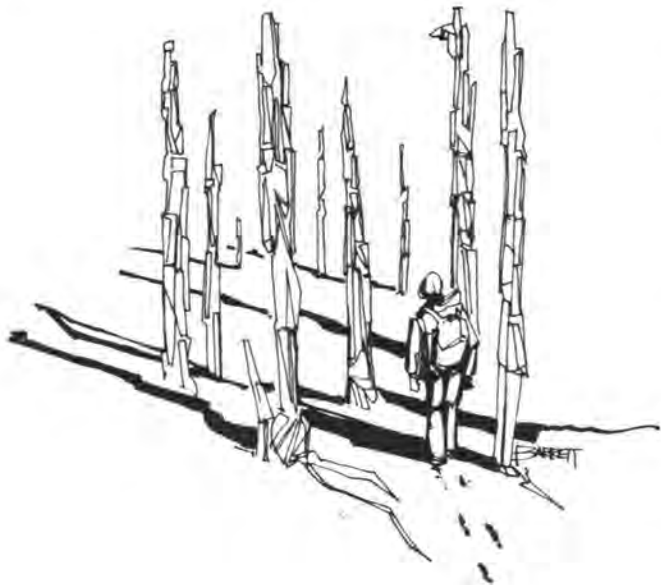
A crystal character can be tied into peripherals as if it were a computer. It can read databases, but can't run programs — it has to learn like a human character. (This is inefficient in many ways, but the crystals' long-dead makers had different requirements.)

Advantages: A crystal has +2 IQ and +1 HT. It has PD 3 and DR 6. It is immune to disease. It has Telepathy potential, but must use character points to buy skill and power. Most physical advantages are impossible for crystals; most mental advantages are available.

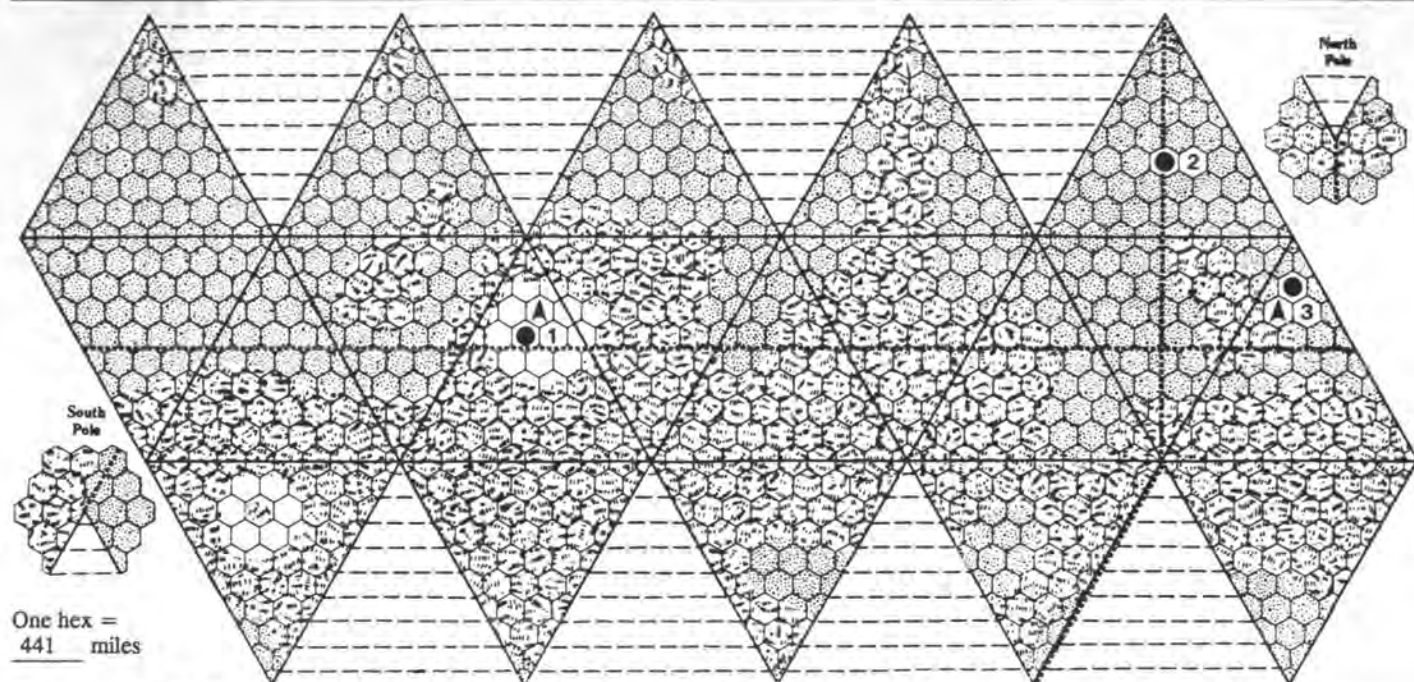
Disadvantages: Bad reputation: -2 reaction from those who know that Von Berg crystals are basically hostile. (A crystal character does not actually have to be hostile, but most are. Mental disadvantages such as paranoia and prejudice are appropriate.) Crystals can't move unless they are wired into a vehicle — so many are. This is a good way for a crystal to spend its initial money.

ST and DX of a crystal are meaningless; put no points into these stats.

There is no overall point cost or penalty to be a crystal.



PLANETARY RECORD: Von Berg (Korris III)



Planet type Rockball Diameter 6,300 mi. Gravity .46 G Density 3.2 Composition Low-Iron
 Axial Tilt 17° Seasonal Variation Mild Length of Day 2,328 hours Length of Year 2.71 days/ 263 Earth days
 Atmosphere: Pressure .6 (Thin) Type and Composition Oxygen 53%, Nitrogen 30%, others 17%
 Climate Subfrozen Temperatures at 30° latitude: Low -80° Average -72° High -60°
 Surface Water 0% Humidity 0% Primary Terrain Desert
 Mineral Resources: Gems/Crystals Ext. Plentiful Rare Minerals Scarce Radioactives Plentiful
 Heavy Metals Scarce Industrial Metals Scarce Light Metals Plentiful Organics Absent
 Moons 1 moonlet — Gem

Biosphere: Dominant life form Crystal life — sentient and telepathic
 Other significant life forms None

Civilization: Population(s) 17,500 (PR 4) Tech Level(s) 10* Control Rating 4

Society Corporate government

Starports Class III at Paklay; Class II at Rockton ice mine

Installations Summersun Mercenary Co-Op, Cold Environment Training Center; several mining companies

Economic/Production Currently exports only radioactives and a few light metals; crystal mining presently illegal

Other notes: Rockton Crater, on the equator, and Droner Crater, further south, are full of ice — the only sources of water on Von Berg
 Map key: 1. Rockton ice mine 2. Summersun Cold Environment Camp 3. Paklay (includes Survey research station). * All equipment imported

System Information:

Star Name Korris Type M9 V Location Old Frontiers 2/-6/-9
 Biozone 0.1-0.2 Inner Limit 0 Number of Planets 9

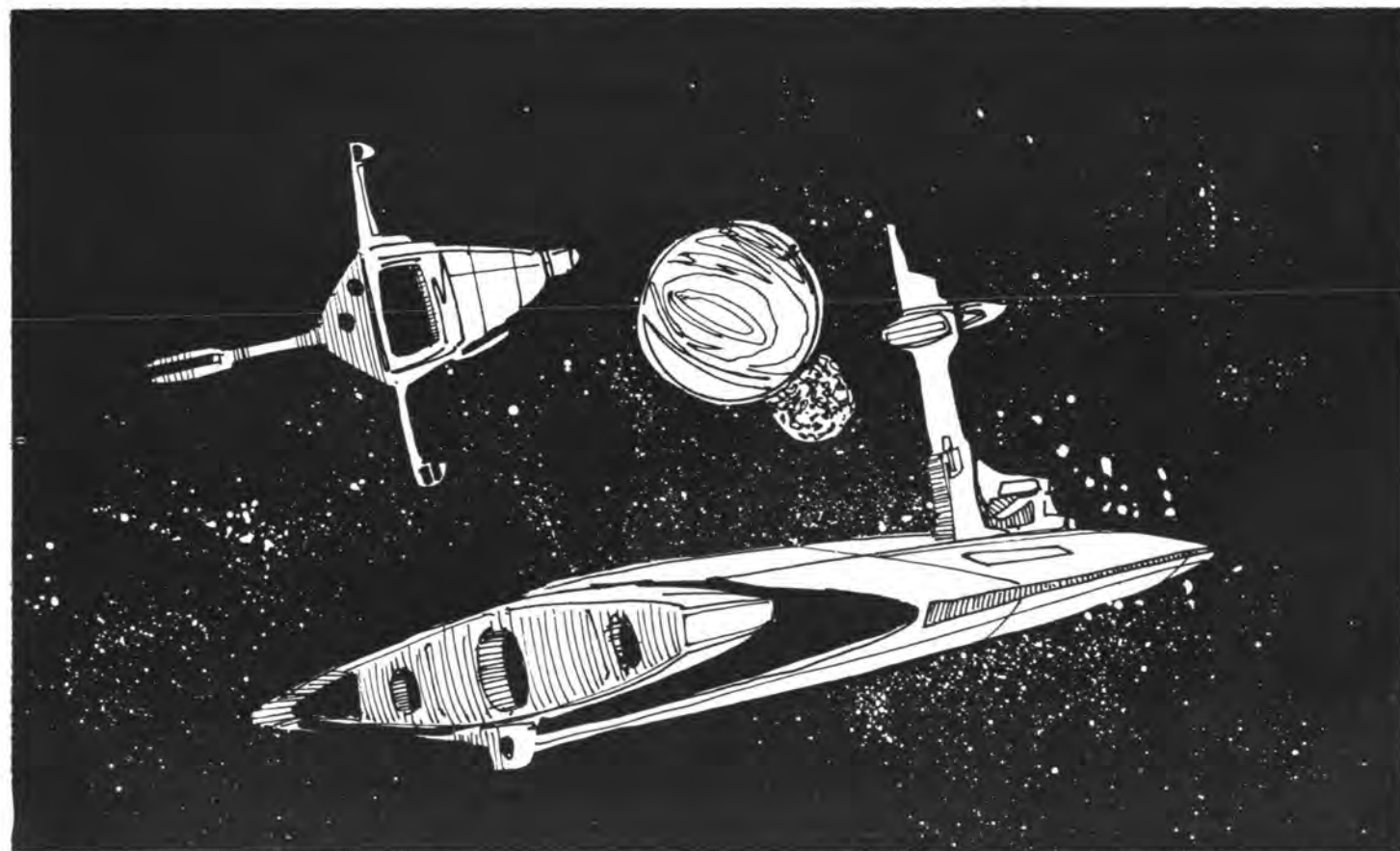
Planet	Orbit	Distance	Type	Diameter	Density	Gravity	Atmosphere	Notes
Adroit	1	.6	Rockball	2,600	3.6	.21	Trace methane	—
Unstrut	2	.9	Rockball	2,900	3.0	.20	None	—
Von Berg	3	1.2	Rockball	6,300	3.2	.46	Thin, high oxygen	Detailed above
Spree	4	1.8	Rockball	7,100	3.6	.59	Trace methane	—
Ruhr	5	3	Rockball	4,200	3.2	.31	None	—
Jeetze	6	5.4	Icy rockball	9,600	3.7	.81	Very thin methane	—
Pegnitz	7	10.2	Gas giant	12,400	2.4	.68	Hydrogen-Helium	Faint ring
—	8	19.8	Asteroid belt	—	—	—	—	—
Saale	9	39.0	Rockball	3,400	3.1	.24	Trace fluorine	—
Hase	10	77.4	Icy rockball	3,200	3.2	.23	None	—

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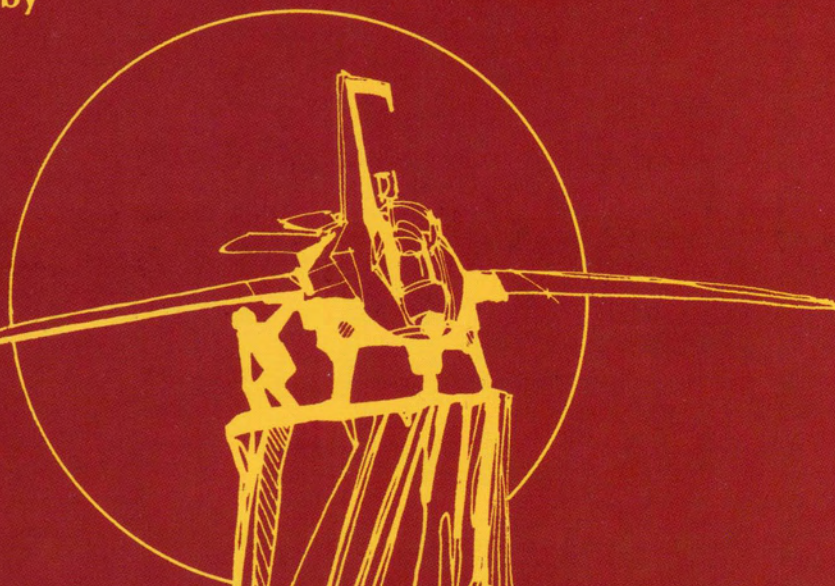
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